THE RELEVANCE OF QUALIFICATIONS OFFERED AT A SELECTED TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) COLLEGE IN MPUMALANGA

by

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I declare that the above dissertation is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I further declare that I submitted the dissertation to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

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DEDICATION

This study is dedicated to my beloved parents, Habel Gachanja Wainaina (may his soul rest in peace) and Beatrice Wairimu Gachanja, as well as all those who prayed and walked with me throughout my study journey. Thank you.

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ABSTRACT

Considering that Mpumalanga province has a large petrochemical plant owned by a multinational company that runs and owns mines, the province should abound with employment opportunities for Technical and Vocational Education and Training (TVET) college graduates, especially those from the local Gert Sibande TVET College. However, students with TVET college qualifications struggle to attract employment. Therefore, this study explored the question, “What can TVET providers in Mpumalanga do to enhance students’ employability?” The research was conducted in a selected TVET college in the province. The study employed a qualitative approach and an interpretive paradigm. Data were collected using semi-structured interviews, focus groups and document analysis. The identities of all respondents were protected. Upon analysis of the results, several measures that the TVET college, stakeholders and employers could employ, emerged. There was a lack of proper skills for graduates, qualifications without relevance and employers hardly acknowledging the TVET college qualifications. Some of the recommendations made include collaboration, relationship building between stakeholders and revision of the National Certificate (Vocational) [NC-(V)] curriculum. Topics for future research are also suggested.

KEYWORDS:

TVET college; qualification; employability; Mpumalanga; relevance; students; skills; industries; employers and graduate.

GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AsgiSA:	Accelerated and Shared Growth Initiative in South Africa
CBI:	Confederation of British Industry
CfE:	Centre for Employment
DHET:	Department of Higher Education and Training
ESD:	Education for Sustainable Development
FET:	Further Education and Training
HEQC:	Higher Education Quality Council
HRDC:	Human Resource Development Council of South Africa
HSRC:	Human Sciences Research Council
ICT:	Information and Communication Technology
LMIP:	Labour Market Intelligence Partnership
NADSC:	National Artisan Development Support Centre
NATED:	National Accredited Technical Education Diploma
NC(V):	National Certificate (Vocational)
NEET:	Not in Education, Employment or Training
NQF:	National Qualifications Framework
NSF:	National Skills Fund
RSA:	Republic of South Africa
SAGCI:	South African-German Chamber of Commerce and Industry
SAQC:	South African Quality Councils
SETA:	Sector Education and Training Authority
SSACI:	Swiss-South Africa Co-operation Initiative
TVET:	Technical and Vocational Education and Training
TVSD:	Technical and Vocational Skills Development

UNESCO: United Nations Educational, Scientific and Cultural Organisation

VET: Vocational Education and Training

WIL: Work-Integrated Learning

TABLE OF CONTENTS

LIST OF ANNEXURES:

LIST OF FIGURES

LIST OF TABLES

CHAPTER ONE: ORIENTATION TO THE STUDY

1.1 ORGANISATION OF THE CHAPTER

Chapter one gives an orientation of the introduction and background of the study, followed by the statement of the problem, purpose and impact of the study. The perceptive primary research question and sub-questions also follow. The theoretical framework that underpins the study and its relevance are discussed. The research paradigm and approach, data collection, including data analysis, are also discussed. To clarify what this study is about, structures are stipulated, definitions of terms explained, and the study concludes by giving a summary and a description of the dissertation.

1.2 INTRODUCTION

Unemployment and under-employment of the youth are deemed to be major socio-economic problems in Africa and would be so for the province of Mpumalanga in the Republic of South Africa. A report released by the Swiss-South African Co-operation Initiative (SSACI) established that some of the state-owned companies conduct in-house artisan training without notifying the National Artisan Development Support Centre (NADSC). Consequently, these situations compromise the employment rate in selected regions of Mpumalanga, and Africa as a whole (Akoobhai, Duncan & Mogane 2016). Technical and Vocational Education and Training (TVET) colleges are a source of hope for many young South Africans who have made the TVET college their institution of choice, hoping that their potential will be realised, along with a chance to develop that potential at one of the well-established state-owned or private companies in their communities (DHET 2013a).

One of the purposes stated in the Further Education and Training College Act No.16 of 2006 (FET Act) is enabling students to acquire the necessary knowledge, practical skills and applied vocational and occupational competencies essential for employment, or higher learning or entrepreneurship (RSA 2006). The TVET college sector qualifications and programmes are anticipated to be responsive and provide the necessary knowledge and skills for employability, consequently alleviating poverty in surrounding communities (RSA 2013).

TVET college education is recognised as a sector capable of providing required skills and capabilities, not only for employment and the creation of jobs to alleviate poverty,

but also contributing to economic, technological and national development (UNESCO, 2001; Fein & Wilson, 2005; Maclean 2005). The rationale with TVET college training, on the other hand, is to build a more equitable society, simultaneously tackling economic and social inequalities plus providing access to quality education and training to a broader student group (Loynes 2014).

In this regard, all TVET colleges' programmes need to be reviewed as most of them are considered intricate to manage, challenging to recognise, and not sufficiently quality assured (Human Resource Development Council of South Africa (HRDC, 2014). As a result, the TVET college sector cannot respond to the needs of the industry (Okoye, Okwelle & Chijioke 2013).

TVET colleges are expected to develop relationships with industries and modify their (TVET colleges) programmes to suit the workforce in their region to afford functional employment to enrolled students after completing their studies (DHET 2012). As cited in the Human Sciences Research Council (HSRC) pathway's work-stream of August (2014), despite the proclamation of the FET Act, that states of responsiveness to the needs of employers within their surrounding communities, TVET colleges do not seem to record successes of students who have acquired functional employment after graduating (Needham 2013). The aim of the Skills Development Act No. 97 of 1998 (SDA) is to encourage workers to participate in learning programmes that are crafted for improving the chances of employability of students enrolled at local community TVET colleges. This is to result in prompting restoration through "training and education" (Needham 2013).

The intention is to enable previously disadvantaged and low-income students the opportunity of the entrance to former unavailable positions in the labour market due to past political dispensations (RSA 1998). However, many TVET college education and training authorities do not have a workable system that enables them to track student progression into functional employment. Also, there is no research data found at all, to prove that students acquire work after learning at a TVET college (Needham 2013).

Against this background, this study on TVET college provisioning explored the relevance of a TVET college qualification for functional employment. The qualification that the research fixated on is a three-year National Certificate (Vocational) (NC(V) certificate. It is a National Qualifications Framework (NQF) Level 4 qualification equivalent to a Grade 12 certificate at a secondary school. Gewer and Akoobhai

(2012) found that companies that want to employ artisans, opt for higher achievers, thereby, narrowing the chances of those that are achieving the same mid-level qualification at a TVET college. These companies also question the quality of the TVET college curriculum content.

1.3 BACKGROUND TO THE STUDY

The United States of America's (USA) Community College Initiative (CCI) Programme's intent is to build technical skills, enhance leadership capabilities and strengthen English language proficiency to provide their students with opportunities for professional internships, service learning, and community engagements activities. It also offers participants opportunities to engage professionally in their training to prepare them intensely for the world of work (Makhaphela 2017).

The programme differs with those of the South African TVET colleges in that it provides opportunities for professional internships, service-learning and community engagements activities. However, the South African TVET college programmes in Engineering and Business Studies consist of four vocational subjects that are related to professional courses, and three fundamental subjects, namely English Language, Mathematics or Mathematical Literacy and Life Orientation. The students enrol for seven subjects per programme, excluding opportunities for professional internships, service-learning and community engagements activities.

Although the subjects offered do not necessarily provide all the required skills needed to attract functional employment, the training of artisans such as electricians and fitters and turners, have recorded a high enrolment number. The reason for this improvement is attributed to more admittance of artisans, as opposed to the demand for artisans from industries. This results in a huge supply of artisans as opposed to the industries' demands (Akoobhai, Duncan & Mogane 2016).

There has been an initiative to increase the number of enrolled students in TVET college courses, without focusing on their relevance being responsive to employment, knowledge and skills needs for functional employability (Needham, 2013 & DHET 2013). According to Gewer and Akoobhai (2013), the perspective of the TVET college sector curriculum is aimed at providing the necessary foundation to enter the workplace and naturally train high school leavers in specialised mid-level occupations.

Subsequently allowing the practical component of the study to take place in a workplace or simulated environments at the TVET college (DHET 2010).

Considering preparing students skilfully for employability, some TVET colleges in South Africa have partnered with various countries like the USA, Germany and the United Kingdom (UK) to launch various institutions of service for practical experiences and internships. Such are the Centre for Energy Training at the Cape Peninsula University of Technology, the Samsung Electronics Engineering Academy at Gert Sibande TVET College Skills Academy, and the German Engineering at Eastcape Midlands TVET College and Lovedale TVET College (Grobbelaar, Swart, Classen & Ndhlovu 2017). These partnerships with TVET colleges are anticipated to offer internship opportunities, practical experiences and apprenticeship opportunities to students who require these opportunities in the South African TVET college programmes. According to Grobbelaar *et al*. (2017) and Van Niekerk (2017), international partnerships ensure that South African artisans are skilled to compete and work at an international level. However, these partnerships are not enough to match the demand for highly qualified artisans yearning to secure these opportunities with the hope of immediate employment.

Nevertheless, the community goals relating to creating functional employment have to be established to serve both the community and the individual (Finch & Crunkilton 1989). These goals are, however, to relate to the development of a labour policy with a set of priorities for youth based on political, social and moral values for the community.

TVET colleges are expected to facilitate employability of students who were previously disadvantaged to improve their employment prospects and to restore those disadvantages through “training and education” (RSA 1998). However, Cosser, McGrath, Badroodien and Maja (2003) found that less and not more than a third of engineering students at most TVET colleges were employed after completing their studies, with the remaining two-thirds being unemployed. Cosser *et al*. (2003:86) and Gewer (2009) argue that TVET colleges have limited impact on the rate of employment, particularly employment relevant to an area of study.

The TVET college sector lacks enough institutional options to afford for the demand for further learning as well as a pathway into the labour market. Besides, TVET

colleges do not make applicable and credible programmes available in desirable technical and vocational learning capacities leading to employability (Cosser, Kraak & Winnaar 2011). This results in students opting to seek higher education training possibilities, irrespective of the employability options (Cosser *et al*. 2011).

In this regard, the TVET college sector should adhere to the commitment to improve the lives of South Africans by focusing on three areas of concern. These areas relate to the disjuncture between education and training, the skills needed for the economy and the failure of the TVET colleges to produce productive citizens applicably trained for skills shortages experienced in the South African economy (DHET 2011; Powell, Visser, Du Toit & Kruss 2007).

1.3.1 TVET college sector functioning

Maclean and Wilson (2009) found that the TVET college curriculum as a field, usually make various changes to align it with the demand made upon it. As a result, the TVET college is apprehensive about the acquisition of knowledge and skills for functional employment. The Campbell Collaboration (2013) described vocational training as one that prepares students for jobs that are related to a specific trade or occupation, but when compared to vocational education, it is better interrelated to the labour market and employment development system (Campbell Collaboration 2013).

In the mid-1990s to mid-2000s, with the decline in interest of labour productivity, political and policy communities in many low-and middle-income countries (LMICs) remained attracted to the assumption that there might have been possibilities of TVET colleges and unemployment reduction by equipping individuals with relevant skills and knowledge and enabling them to respond to employment opportunities. Hence, governments and international donor agencies, particularly in the sub-Saharan African and South Asian countries, resumed discussions on how best to source the demand for skilled labour. The increase in tertiary technical education has been mainly a response to social demands for more openings in higher education (King & Palmer 2010).

Globally, with unemployment and under-employment rates for the youth being 12.7% International Labour Organization (2011), this high rate has sparked pertinent debates in education and training regarding productivity and competitiveness including an emphasis on work- and skills-based solutions to economic competition and poverty (Campbell Collaboration 2012).

Figure 1.1 indicates how gradual the rise has been, and there has been no change in improving the high rate of unemployment.

Figure 1.1: Graph on the current unemployment rate

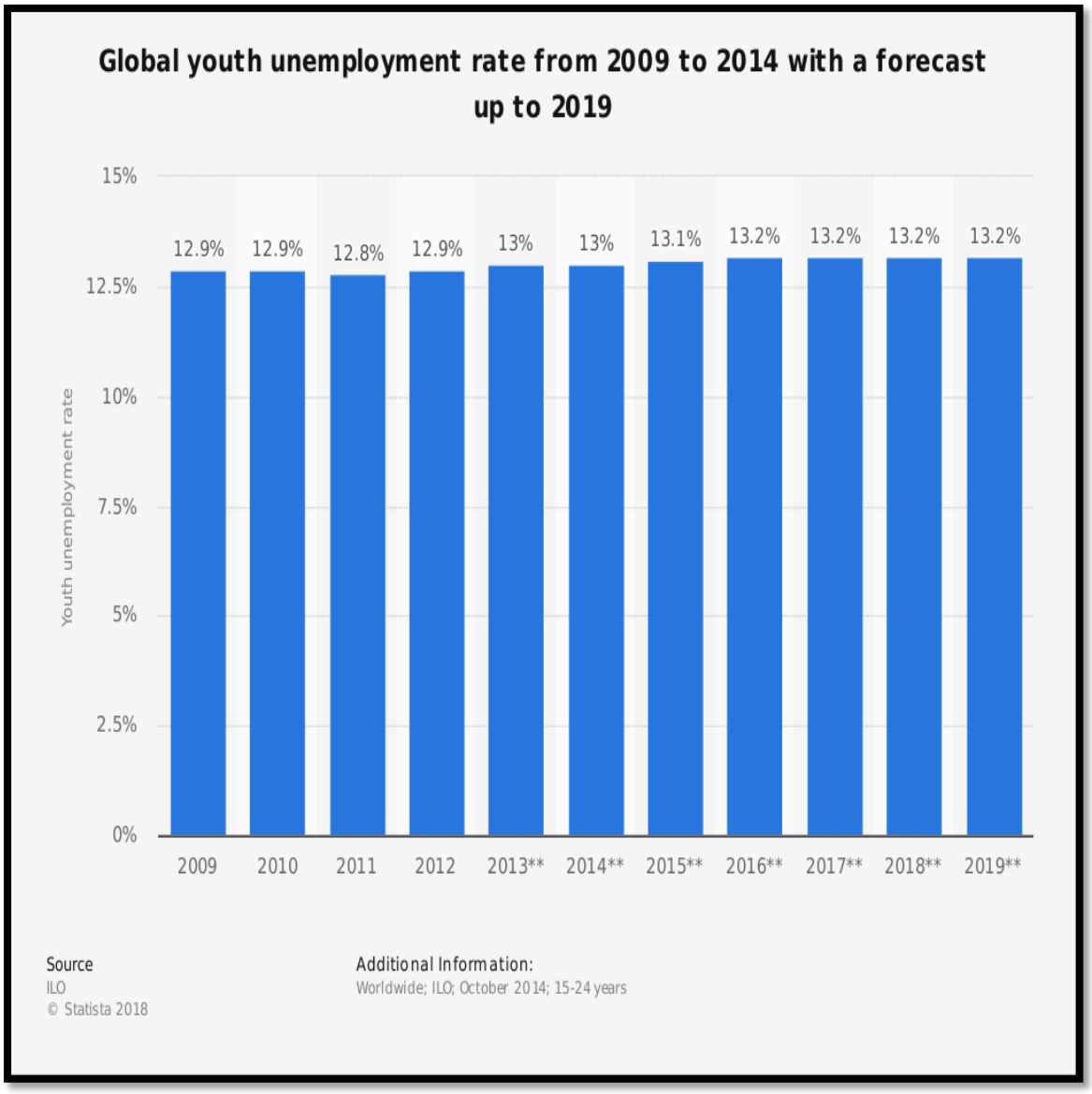


Figure 1.1 above shows statistics of youth unemployment rate from 2009-2019; being 12.9% and 13.2% in 2019 respectively. An increase of 1.7% in 10 years is very high and if nothing is done to create opportunities for the youth to attain employment once they graduate from a TVET college or higher institution, the youth may lose the value for education. A TVET college is an institution with many young people and has to create opportunities for those youth if its primary focus is their needs and those of society.

TVET college education originates from the arrangement of work-study employment rendering youth leaving school an opportunity to enter employment, gain knowledge and skills under guidance in the workplace, which is then supplemented by formal training to obtain a formal training certificate. The establishment of vocational education was motivated by the following three principles (National Academy of Science 1976:2-3):

- The primary focus is on the needs of the students and those of society.
- There is a special effort to meet and serve economically and socially disadvantaged students.
- There is a high degree of flexibility for vocational education students to choose careers and change occupations.

Based on these principles, the TVET college sector in South Africa has a responsibility to employers to supplement labour supply with a skilled workforce that is capacitated with applicable and relevant skills that are representative of qualification of good quality. This should increase employability in industries where communities have economically and socially disadvantaged students.

However, if equipping individuals with relevant skills, knowledge and empowering them to respond to employment opportunities remain an allure to political and policy communities in many low and middle-income countries such as South Africa, then the anticipated link between TVET college tuition and reduction in unemployment, will see a turnaround (World Bank 2007). On account of the local situation, the TVET college sector in Mpumalanga remains a beacon of hope for students that believe they can change their circumstances with the qualifications they can acquire at a TVET college.

In Mpumalanga, the responsibility of the TVET college sector is to train and provide students with the knowledge and skills they require to be employable. However, this has proved to be a challenge. There have been studies conducted on artisans, apprenticeships and learnership programmes separately (HSRC 2011), but none of these studies has been able to provide a full depiction of TVET college pathways into trades and occupations. Most of these institutions do not have a skills centre where they can afford students with opportunities for simulation purposes. In Mpumalanga, specifically in the Gert Sibande district which has only one Skills Academy, all the five campuses, with additional engineering-related programmes and practical experience, cannot have enough accommodation at the single facility.

Killian and Mutandwa (2016) pointed out that discovering artisanship ensures that students who can acquire an apprenticeship work while studying. Thus, they are offered employment on a contract basis until they complete their studies. Thereafter, they may be permanent employees. The arrangement is that employment is first acquired with workers being trained on the job, after which they complete a formal qualification at a TVET college in pursuit of securing permanent employment. Killian and Mutandwa (2016) emphasise that TVET college graduates in low- and middle-income countries rely on on-the-job training. This training is supplemented by academic/theoretical instruction through dual training programmes.

A problem encountered with a dual-training arrangement is that employers are hesitant to absorb TVET college students in training opportunities for cost-effective reasons. Employers prefer to train their staff who have been working for them as general workers, regardless of government compulsions requiring employers to afford TVET college students' opportunities to explore real work for them to master their studies more adequately (Mputhi 2014).

Many NC(V) NQF Level 4 graduates have a trade qualification but lack satisfactory practical skills due to non-exposure to practical application at both college and workplace. The assumption is that these graduates may still be suitable employees because they have obtained theoretically-related skills of their training, albeit lacking adequate practical skills. McGrath (2012) described 'productivists accounts' as relating to two key assumptions, namely that training leads to productivity, which leads to economic growth and skills, thus 'skills for work' and skills acquired lead to employability.

Not only do productivists assume that 'skills for work' acquired at an institution of higher learning leading to employability, but this assumption also holds that these skills are a solution to reducing poverty and unemployment (McGrath 2012). Against this background, the theoretical framework for this study on TVET college training employability and TVET college provisioning is discussed in section 1.7.

1.4 MOTIVATION FOR THE STUDY

During the researcher's employment as a lecturer in the TVET college sector for the past six years, she had the opportunity to hear concerns regarding TVET college training arrangements. These arrangements relate to frustrations of post-Grade 12 students who enrol at the college for an NQF level 2 qualification, which is an

equivalent of Grade 10. These students' frustration is worsened by the lack of proper career guidance from Student Support Services and the lack of an inclusive curriculum to accommodate students with a Grade 12 qualification and as status quo, they do not qualify to enrol for diploma courses due to high entrance requirements. Additionally, recommendations have been expressed where concerns are also raised regarding the responsiveness of TVET college programmes to labour market skills requirements (McFarlen 2016).

Lack of proper career guidance during enrolment, coupled with priority being for high numbers in enrolment, results in TVET college entrants taking up whichever course that is available. This leads to large numbers of students not completing their qualifications, with a 50% drop-out rate being experienced in the TVET college sector (Akoobhai *et al*. 2016). As a sector that primarily caters for students dropping out of school after Grade 9, or wishing to seek a more hands-on vocation, post-Grade 12 students should be accommodated in Report 191 programmes of the National Accredited Technical Education Diploma (NATED or N courses), granting them an opportunity to obtain a diploma.

Referencing to the requirements of TVET college, where learning for compulsory placement in the workplace as an actual and simulated environment, business, industries and TVET sector should liaise with one another to aid with specifications on skills requirements to enable TVET graduates to be developed as constructive employee feeders (Mputhi 2014).

The researcher was intrigued to determine if young students can attract employment after completing a TVET college NC(V) NQF Level 4 certificate. Many students are from low- and middle-income families and their families are reliant on the relevance of this certificate for the awarding of students' employment. There are opportunities for TVET college graduates in Mpumalanga to be constructive employee feeders because the province has a large petrochemical plant owned by companies with mining operations. The province is geographically located in an area with lots of mines and job opportunities. A quality qualification is a solid motivation to acquire permanent positions that offer hope of long-term employment.

The research expected TVET providers to find possibilities that allow students to attract employment from employers once they qualify, without taking all courses they think will support the ultimate qualification that will attract employment. A

petrochemical company situated close to where the researcher conducted the research, prefers to employ post-Grade 12 learners from high school rather than TVET college NQF Level 4 graduates. The researcher wanted to explore if the TVET college sector is providing relevant knowledge and skills that serve the needs of these established industries in the province.

1.5 PROBLEM STATEMENT

Students who are unable to find employment after completion of their studies infer that their education is meaningless, thus educating them for unemployment (Nzimande 2014). In Mpumalanga, many students with a TVET college qualification struggle to attract employment, as a result, they question the quality and relevance of their TVET college qualifications for employability. The research question inferred from this situation as follows:

1.5.1 Research question

- What can TVET providers in Mpumalanga do to ensure that their qualifications are relevant to enhance students' employability?

To solve the sketched problem, the main research question was divided into five sub-questions that were investigated so that the solution to these sub-questions could contribute to the solution of the main research question.

1.5.1.1 Research sub-questions

- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability, as perceived by lecturers?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability, as perceived by graduates?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability, as required by employers?
- Is there an interface as defined by TVET college stakeholders? If so, what is its nature?
- What can TVET providers and employers in Mpumalanga do to enhance students' employability?

1.6 AIM AND OBJECTIVES OF THE STUDY

This study aimed to determine the relevance of qualifications offered at a TVET college in Mpumalanga to enhance students' employability. The high rate of unemployment in South Africa pose questions about the relevancy of TVET college provisioning as post-school training, although, businesses and industries lack workers with appropriate knowledge, skills and behaviour to perform effectively in the workplace. This research has found that few students secure employment or an apprenticeship successfully with their obtained qualifications at TVET colleges (Akoobhai et al. 2016).

Relating to this scenario on TVET college training, the objectives of this study were expected to:

- Determine sets of skills required for a TVET student's employability as perceived by lecturers.
- Determine the sets of skills required for a TVET student's employability as perceived by students.
- Explore the employers' perspective on viable employability skills for TVET College students.
- Explore whether as defined by stakeholders, an interface exists between skills acquired and skills required and then describe the nature of the interface.
- Determine what TVET providers and employers in Mpumalanga can do to enhance students' employability.

1.7 THEORETICAL FRAMEWORK

The productivists' assumption that skills lead to employability is far-fetched in the surrounding area of Evander and Secunda in Mpumalanga province, with so many youths who have an artisan TVET college qualification and are unemployed (McGrath 2012). Similarly, Bourdieu (1992) used social capitalism to explain the reality of social inequality based on employment opportunities and way of living. Social capital is defined as the sum of resources, actual or virtual, that an individual or a group mounts up by possessing a durable network of institutionalized relationships of mutual acquaintance and recognition (Bourdieu & Wacquant 1992).

Concerning this networking explained by Bourdieu (1992), and referencing it to Secunda and Evander, which are regarded as rural towns of the province, there are bounteous resources such as coal mines, a petrochemical engineering company and

a coal power-producing company where employment opportunities can be explored. For instance, long term solid partnerships or relationships with these companies can be established to afford TVET college students of the region opportunities to acquire internships or apprenticeship for exploration of knowledge and skills gained at the TVET college sector for functional employability (DHET 2012).

The framework employed to guide this study was graduate capital that has been developed to look at new ways of understanding graduate employability. Tomlinson (2017), in his findings, presented a graduate capital model that outlines conceived key resources that have benefits and advantages onto individuals. The key resources are human, social, cultural, identity and psycho-social dimensions acquired through informal and formal experiences.

According to Bourdieu (1992), the social capital theory emphasises the importance of relationships in the sense that it is not a matter of what you know, but rather who you know to excel in life. In this regard, a necessity for TVET college would be to have solid working associations with surrounding companies in their communities, particularly with regards to applicable internships and apprenticeships training for their students.

However, the disconnection between the ability to acquire functional employment and knowledge and skills gained by students at TVET colleges for functional employment is evident due to the lack of strong working partnerships with companies in the region. All things considered, Accelerated and Shared Growth Initiative for South Africa's (ASGISA) strategy was aimed at reducing unemployment and poverty thereupon, accelerating employment equity and improving economic development and empowerment (Akoojee & McGrath 2008).

This section discusses theories around graduate employability skills and graduate capitals which are defined as key resources that afford graduates benefits and advantages that enable them to acquire employment (Tomlinson 2017). The researcher focused on social, psychological and human capitals. The study also outlines how various capitals interlink before elaborating on capitals that model the study although, it has implications and limitations (Tomlinson 2017).

1.7.1 Critical literature

According to Holmes (2013 as cited in Tomlinson 2017), every graduate has skills that they learn and those that are innate, however, there was a difference between innate and graduate skills. Holmes' (2013) concern was on how an employer would be able to co-ordinate these skills and meaningfully allow them to progress in graduates' working lives. The other criticism is on formal skills provided by TVET colleges and how much value they have on graduate employability prospects (Mason, Williams & Crammer 2009; Wilton 2011 as cited in Tomlinson 2017). Tomlinson (2017) denoted that for graduates to acquire employment and be productive in their working lives, there is a range of dynamic interactive forms of capitals needed besides acquired dominant skills to employability. Next paragraphs discuss the various capitals.

1.7.1.1. Human Capital – Knowledge, Skills and Future performance

Human capital regards knowledge and skills as key components for any graduate looking to being productive in the labour market. This concept was developed by an economist, Gary Becker (1993 as cited in Tomlinson 2017), who referred to it as the value attached to higher level qualifications in the labour market. Thus, the development of human capital by acquiring knowledge through higher levels of education and training empowered individuals to progress in the labour market. The strength of this capital was that the more educational improvement one added to their skills the more skilled and productive one got (Tomlinson 2017).

On this account, it shows that the TVET college NC(V) graduates will have to improve on their human capital for them to attract employment in industries around the Mpumalanga region. Most of the employers are familiar with the subject content of the NATED qualifications but not of the NC(V). Therefore, the NC(V) qualification needs to be matched to jobs that graduates seek to acquire in these industries.

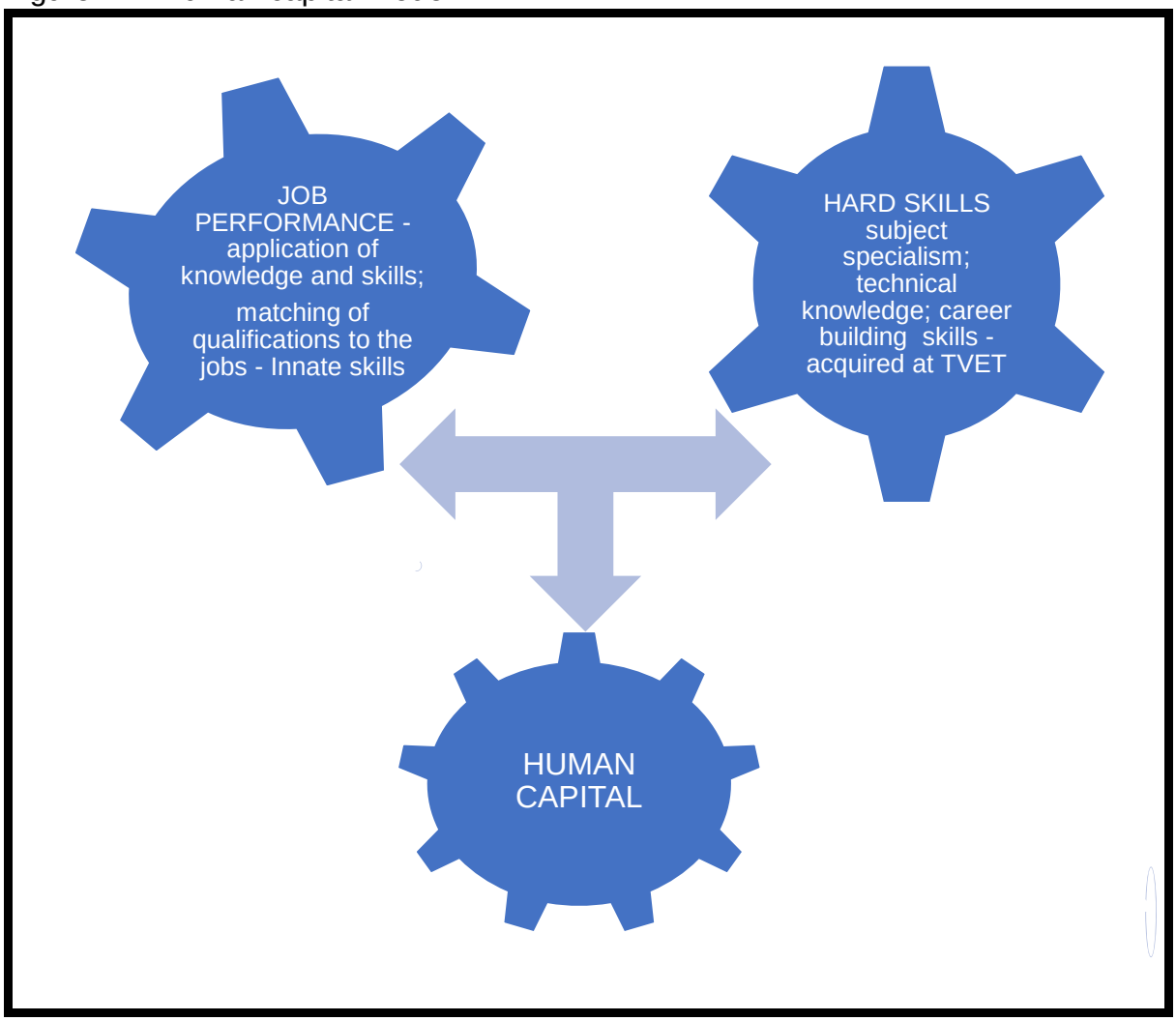
For a TVET college graduate to be productive in their work-life in the future, they need to improve their qualification by registering for a NATED qualification after completing the NC(V), thereby improving on their human capital, as the NATED qualification is accredited (Becker 1993 as cited in Tomlinson 2017). The other connection would be networking with industries so that industries have subject knowledge and content of the NC(V) curriculum and would be encouraged to make contributions to the curriculum to match the required skills they may require for employability. This will

improve the value of the NC(V) qualification, and graduates will improve their human capital with a possibility of employment.

Tomlinson (2017) notes that there are connections between a graduate's formal education and future employment is through skills approaches instilled in them through subject specialism, technical knowledge and career-building skills. Most importantly, a graduate could link these acquired skills to future performance in the industry as it is illustrated in the human capital model, figure 1.2. However, Bridgstock (2009 as cited in Tomlinson 2017) outline that career-building skills require one to have skills such as problem-solving, critical thinking, adaptability, knowing how to apply for a job and write a curriculum vitae (CV) that can be developed by graduates when exploiting job opportunities, before entering and when transitioning to the labour market.

The TVET college curriculum offers these skills in fundamental subjects, which builds confidence in exploiting job opportunities. However, many of these graduates put more value in core subjects that pertain to their core career subjects and less value on these fundamental subjects. Human capital is achieved when a graduate can utilise or deploy all these skills to achieve high job performance. Nonetheless, it is still very difficult for a TVET college graduate to showcase this since there are not enough opportunities for them to get learnership programmes or apprenticeships, especially in Mpumalanga.

Figure 1.2: Human capital model.



1.7.1.2. Social Capital – Networks and human relationships.

Bourdieu's (1986 as cited in Tomlinson 2017) referenced social capital as resources, an individual may have access to because of the connections they may have or associations that they have joined or partnered with. Subsequently, it is also important to tap into these resources that are available to profit employment. Putnam's (1999 as cited in Tomlinson 2017) argue that bonding and bridging ties are essential to social capitalism and they allow individuals' potential insight on what opportunities exist, in what industry, what is needed to access employment opportunity and who the gatekeeper may be (Putnam's 1999). If individuals are socially connected, they are better off both socially and economically (Tomlinson 2017).

In reference to Putnam's (1999) resources that are made available to TVET college graduates of Mpumalanga would be of so much benefit to them since they are potential employability prospects. These resources may be in terms of industry relationships

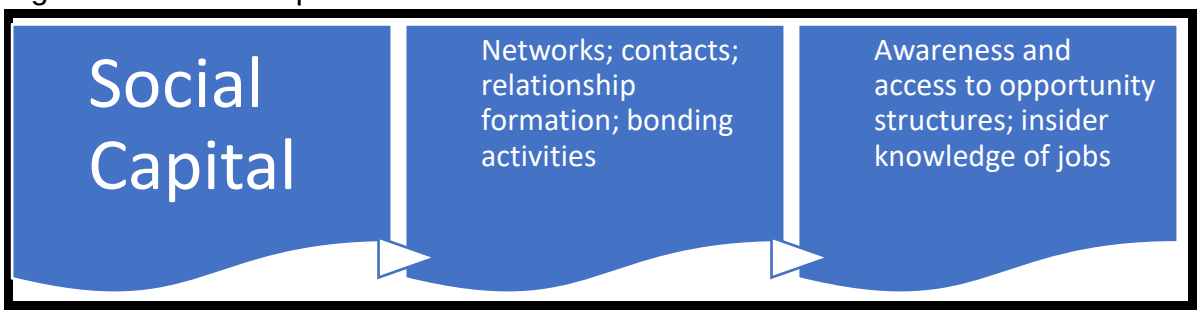
that are formed, internships and apprenticeships available or long-term work-integrated learning (WIL) which would eventually award employment possibilities.

These opportunities give students an advantage to figure out if they wish to pursue a certain career (Tomlinson 2013). Jones, Mann and Morris (2016) research highlighted that not only do students get first-hand knowledge of the work they are doing during internships or apprenticeship and WIL, they also generate trust and the much-needed work experience.

Politically, to bridge the gap between employer and graduate, policies that stipulate expectations as well as curriculum outlines of the NC(V), can be made available to employers, including having direct contact with the employer through career fairs (Tomlinson 2013). As noted by authors Papier, Needham, Prinsloo and McBride (2016), statements from the office of the Minister, strongly urge colleges, employers and SETAs to work together to create on-the-job learning spaces for TVET college students because this will improve youth employment prospects.

Figure 1.3, Social capital model shows how through networks, contacts, relationship formations and bonding activities, the students may have a greater chance of accessing opportunity structures and inside knowledge of jobs that they may never have access to if it were not for established great relationships. Therefore, social capitalism is a necessity for TVET providers.

Figure 1.3: Social capital model.



1.7.1.3. Cultural Capital- Employability and cultural synergy and alignment

Bourdieu (1984; 1986 as cited in Tomlinson 2017) developed the concept of cultural capital which is conceived to be the formation of culturally valued knowledge, dispositions and behaviours that are aligned to the workplaces. It relates to an individual having the ability to display sound interpersonal and behavioural traits.

This is vital to organisations as it helps graduates interact with other individuals with ease. However, the greatest challenge with this cultural capital, despite the perceptual bridges that have been formed through cultural knowledge and awareness, is the synergy that needs to be embodied by the graduates. The graduate's composition is of low-social economic backgrounds and those of a lower-rank who may encounter the strongest hindrances (Greenbank 2011; Morrison 2014 as cited in Tomlinson 2017).

Lindberg (2013 as cited in Tomlinson 2017) highlights another dimension of cultural capital which embodies capitals applicable to graduate employability. For example, there is the manifestation of individuals' desired embodied behaviours and dispositions within a given field (Lindberg 2013). Therefore, a graduate's ability to be able to display various dispositions and attributes within various organisational fields is crucial to employability prospects, which is their personality.

1.7.1.4. Identity Capital – Self-concept and personal narrative.

As defined by Tomlinson (2013), identity capital is the level of personal investment towards graduates' future careers and employability as well as the ability to draw from their own experiences. Cote (2005:225 as cited in Tomlinson 2017) described identity capital acquisition as individuals investing in a certain identity or identities which may be exchanged with others in a variety of contexts. Other research has shown that students' use of extra-curricular activities as a vehicle to present another dimension of themselves, allowing them to reveal a very competitive edge in comparison to the educational profile (Roulin & Bangerter 2013 as cited in Tomlinson 2017).

Holmes' (2013; 2015 as cited in Tomlinson 2017) research argued that for these identities to be embodied as future behaviours and performances, it is necessary to encourage students' potential identities to be noticeable. Tomlinson's (2007:346 2017) research found that students that invest in their future careers portray higher levels of identity capital.

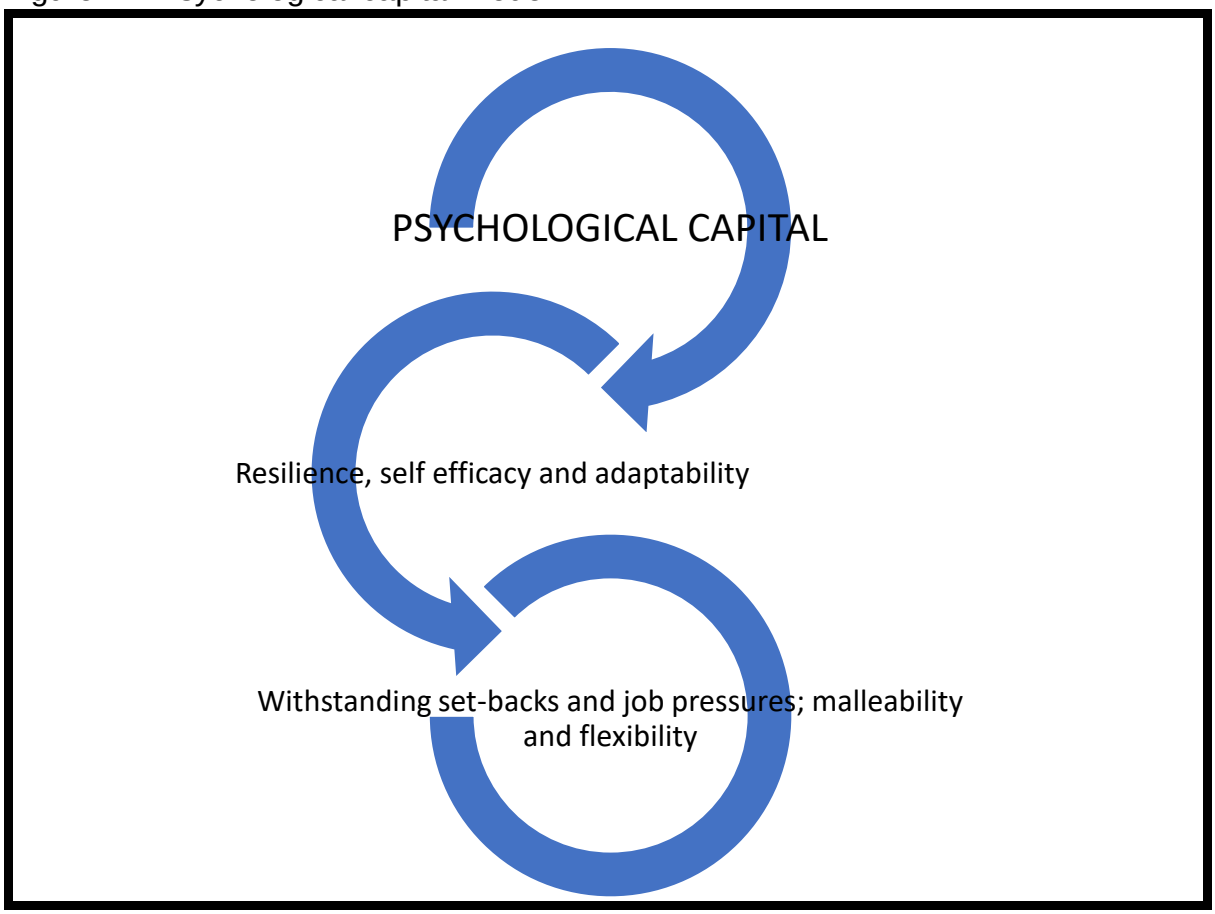
1.7.1.5. Psychological Capital – Resilience and career adaptability

Fugate, Kinicki and Ashforth (2004) stated that the level of a graduate's ability to adapt to navigating uncertain terrains at work, withstanding challenges and setbacks was so vital. For a graduate to have various forms of career adaptability, it required them to have more re-orientated goals and allowed them to make pro-active decisions when

encountering destabilisation with regards to job market experiences (Brown, Bimrose, Barnes & Hughes 2012). The research also highlighted higher levels of career adaptability of individuals and ways to cope with the setbacks of careers. It highlights testing their flexibility to exuding positive psychology capital concept with its roots in the positive psychology literature associated with the researcher (Seligman 1998).

On the one hand, psychological capital is the ability of an individual to solve or cope with challenges that are experienced at work and the ability to learn from these experiences (Tomlinson 2017). Also, it is the ability to manage stress levels of a career and how well they can adapt to the various changes faced daily. Psychological Capital Model, figure 1.4, shows how the character traits of this capital are interlinked. They are a constant challenge to an individual since one may have to constantly adapt, depending on which organisational field they are at and the constant work pressures they may experience daily.

Figure 1.4 Psychological capital model.



1.7.2 Application of the theoretical framework to the study

The graduate capital model employed for this study offers an understanding of what situation in the Mpumalanga region is and the partnerships that exist with the college management, employer and graduate. The focus of this study is to understand if an interface exists between skills acquired by TVET college graduates and those that are required by the employers, concerning employability. Data collected from participants comprising TVET college staff, graduates and employers were analysed to understand the type of partnerships, if any, exist among them.

The graduate capital model is considered the most suitable model for this study since it highlights all capitals that a graduate would require in employability. The framework has five capital models as elaborated prior, even though this study focused on three capitals that speak to the research, namely social capital, human capital and psychological capital. The three capitals were clear to the study since they have an emphasis on what TVET providers need to form solid relationships that may enable students' easy access to the opportunities of employment in the region.

The human capital assumes that besides hard skills that graduates acquire at TVET college as essential to have to secure employment, they also need job performance skills. Essentially, these are skills that allow them to apply the knowledge and skills learnt at a TVET college, then this qualification is matched to the job accompanied by the innate skills that they may have. In the researcher's opinion, this is the most essential capital that graduates need to have as it equates to higher chances of employability.

Psychological capital is one that requires the ability to solve or cope with challenges that are encountered while at work or if one falls into setbacks while at work. Questions have been raised as to whether TVET graduates have the resilience to hold on to job pressures and perform well (Paper et al. 2016). Rather, do they have the flexibility to adapt to job pressures? Does the TVET curriculum make provision for all that pertains to psychological capital?

Regarding the scarcity of quality skills in this country, cooperation and partnerships of the workplace, education providers, the state and social partners (trade unions and employer bodies) are necessary to establish successful apprenticeships (Steedman

2012). Tomlinson (2017) continued to say that leadership from government, both local and national, was required to facilitate partnerships which brought relevant role-players and provided information to those that required it (Steedman 2012).

1.8 RESEARCH METHODOLOGY

For this study on the relevance of TVET college qualifications, data were collected by literature study, literature review and empirical investigation. Data collected through conducting literature study and review were used to support the conducting of empirical investigation. The methodology and design for empirical investigation are discussed in the next section.

1.8.1 Research paradigm and research approach

According to Fouche and Schurink (2011), a qualitative researcher is concerned with understanding rather than explanation. This qualitative study sought to provide an in-depth description of which set skills are needed by TVET providers to capacitate students' ability to attract functional employment. To understand students' experiences and perspectives on the value they allocate to a TVET college qualification, an interpretivists' research paradigm was directed to collecting data for empirical investigation (Du Plooy-Cilliers 2015). The knowledge and understanding developed with this research on TVET college qualifications were based on lecturers, students and stakeholders sharing their expectations of TVET college training.

Therefore, the reality was interpreted based on the meaning that participants gave to their life-world and lived experiences (Fouche & Schurink 2011). Various intellectual traditions influence an interpretivists' research paradigm, the dominant being hermeneutics, phenomenology and symbolic. As a phenomenologist researcher, the task of this research was to interpret and gain an understanding of human actions and then describe these actions from the point of view of persons being studied (Du Plooy-Cilliers 2015), namely TVET college NC(V) NQF Level 4 graduates and their interpretation of the relevance of their qualification.

The researcher incorporated the methodological position of interpretivism which aimed to study reality subjectively as well as objectively and used methods that were sensitive to the context. This helped to gain an in-depth understanding of the phenomenon being studied, namely TVET college qualification for employability.

In qualitative research, the approach is always to understand a 'whole world experience' as interest is in-depth of human experience, including all personal and subjective peculiarities that characterise individual experiences and meanings associated with the phenomenon being studied (Fouche' & Schurink 2011). Based on a qualitative research approach, data were collected narratively through in-depth interviews, focus groups and document review.

The researcher's overall purpose of this study was to explore the phenomenon to understand the unknown, which was the students' perception of the relevance of a TVET college qualification (Davis 2015). Kumar (2011) explained that a descriptive study aimed to describe a situation or problem or phenomenon systematically and provide information about a certain phenomenon. Notably, this study can be regarded as descriptive.

Additionally, the study explored if there is an interface between skills acquired by TVET college graduates and skills required by automotive, mechanical, engineering and related design, electrical and mechatronics for their employability. This paradigm enabled the researcher to gain insight from the stakeholders' perspective on employability skills required from TVET college graduates.

1.9 SELECTION OF SITES AND PARTICIPANTS

Creswell (2007) confirmed that the actions of a qualitative researcher include the collection of data at the site where participants experience the issue or problem under study. The site for this research is a public TVET college in Mpumalanga province. The college is supplemented by a petrochemical company in Secunda. A sample is a group of selected participants from whom data were collected (McMillian & Schumacher 2010). The anonymity of all the participants from the institutions is protected.

The research sample was drawn from an exploratory case study consisting of current engineering students, engineering graduates who have completed their studies at this TVET college, lecturers that are teaching at the selected TVET college, employers and stakeholders of this region of Mpumalanga. The researcher attempted to understand the nature of the case study, thereupon exploring their journey of the study experienced at the TVET college (Gomm, Hamersley & Foster 2000).

The criterion that was used by the researcher to select graduates as participants for this study has an emphasis on the experiences of graduates who have not been able to attract functional employment. Current engineering students were selected based on their position as final-year students and their willingness to share their views on the qualification they were enrolled for. Equally important, lecturers that are teaching the programmes at the TVET college were selected as subject experts.

The participation of the Skills Academy Campus Manager in Standerton, Mpumalanga, was motivated by the intention to explore the empirical situation that makes the campus unique, if not different, from other campuses of Gert Sibande TVET College. This Skills Academy, the Sector Education and Training Authority (SETA) and one local industry are involved, and partnerships had been formed. as well as investment in a practical centre that allows students to experience a practical component of the course they are studying. Furthermore, participants who are employees of these companies, gave insight into whether the curriculum of Gert Sibande TVET College was in line with their work-related needs and to provide reasons for the college students not being capacitated in functional employment at their companies.

1.10 DATA COLLECTION METHOD AND PROCEDURE

Concerning Rubin and Babbie (2001) who stated that field researchers observe everything within their field of study and as a result do not sample but create data by selecting and using it as evidence in the analysis. Data were collected using semi-structured individual interviews, focus group interviews, literature study and review. In qualitative research, data are often derived from one or two cases and for this research, cases were selected purposefully because they allowed access (Silverman 2004). The case study of this research allowed easy access to participants.

Strydom and Bezuidenhout (2015) pointed out that observed individuals' behaviour has a purpose which reveals an expression of deeper feelings and beliefs. They also assume that people can structure, experience and describe their world. Therefore, each case had to be studied against the background of more universal social experiences, in which Denzin and Lincoln (2000) acknowledged as "to study the particular is to study the general." Creswell (2007), states that apart from individual interviews and focus groups, data were also collected through examining documents.

The Chicago School of Sociology developed a technique of participant observation that include three main principles, namely studying people in their natural environment, repeated interaction with people over time and developing theoretical concepts based on an in-depth understanding of perspectives of people's environment (Neuman 2011). All three techniques apply to this qualitative study on a TVET college qualification. Additionally, Creswell (2011) commented on these techniques not being repetitive, in the entire qualitative process, the researcher kept a focus on understanding the meaning that participants embrace about the problem of a TVET college qualification. Applying these three techniques allowed accuracy when interpreting the collected data.

The overall purpose of the research was to use relevant sampling techniques in qualitative research to collect richest data, ideally, a wide and diverse range of information collected over a relatively prolonged period (Strydom & Delport 2015). The case study based on a qualitative approach is viewed as a method that gives voice to 'ordinary' people (Gomm, Hammersley & Foster, 2002; Babbie & Mouton 2001). This research was intended to give voice to ordinary people of Mpumalanga province.

In this case study on TVET college qualifications, the approach involved recounting the real-life situation of 'ordinary' people by rigorously describing the scenario in which the phenomenon occurred. It allowed a deep exploration within a natural context and provided a thorough understanding of the lived experiences of participants. Considering the focus group interviews, an exploratory case study involved a rigorous description of the case within its broader context to understand the nature of the specific case (Strydom & Bezuidenhout 2015).

In this research, focus groups and individual interviews were conducted to determine participants' experiences regarding the qualification. In-depth interviews were conducted as open-ended conversations and recorded for authenticity purposes (Strydom & Bezuidenhout 2015). For this research, interviews were conducted in focus groups and open-ended conversations were recorded to collect data from participants.

This research approach allowed the collection of evidence of participants' feelings and opinions that were shared and experienced by people who were in similar situations (Strydom & Bezuidenhout 2015). Regarding historical research, Strydom and Bezuidenhout (2015) stated that historical research is based on analysis and

description of events. The researcher also collected data by looking at the college brochure and certificates of student participants to make sense of a historical event. This research on a TVET college qualification was considered as an oral history with regards to conducting interviews like historians to have more knowledge about the topic.

1.11 DATA ANALYSIS AND INTERPRETATION

Qualitative content analysis is understood as subjectively interpreting the content of text data as the most effective method to understand narratives and stories, written or in spoken words (Hsieh & Shannon 2005; Maree 2007). Qualitative content analysis was used for subjective interpretation of the content of text data through systematic classification process of coding and identifying themes and patterns. This relates to qualitative content analysis, thus the researcher used the content of collected data and coded (Bless, Higson-Smith & Kagee 2006). As a method to systematically analyse the meaning of communications, qualitative content analysis dates to 1930s where it served as the starting point for modern-day qualitative analysis of transcribed interviews directed by an inductive meaning-making process (Bless, Higson-Smith, & Kagee 2006).

About subjectivity in analysing qualitative data, this research focused on a phenomenological approach which is important to help avoid imposing own assumptions or preconceptions on data, and to focus on describing only participants' lived experiences of particular aspects of their lives (Bless, Higson-Smith & Kagee 2006).

1.12 TRUSTWORTHINESS AND TRANSFERABILITY

Since qualitative research does not use numbers as evidence, a different criterion was used to determine trustworthiness or credibility of research findings (Koonin 2015). In providing an in-depth understanding of the phenomenon of study, trustworthiness was pursued which was divided into credibility, transferability, dependability and conformability (Lincoln & Gube 1985). The researcher recorded conversations with participants' consent and assured them that the information they provided would be for the research only.

The ability of findings to be applied to a similar situation and delivering similar results is known as transferability. Reliability is the extent at which the observable (or

empirical) measures that represent a theoretical concept are accurate and stable over repeated observations (Bless, Higson-Smith & Kageee 2006). Transferability allows generalisation within an approach that does not lend itself to generalised findings (Collis & Hussey, 2003; Lincoln & Guba 1985; Shenton 2004). The aim was to ensure that the research findings were valid and reliable, persuading readers that the findings were credible and a worthy contribution to the body of knowledge (Collis & Hussey, 2003; Lincoln & Guba, 1985; Shenton 2004).

1.13 ETHICAL CONSIDERATIONS

Ethics requires integrity on a personal level, with implications reaching further than the individual. A researcher should act with integrity to stand by ethical principles and professional standards that are essential for practising in an ethically acceptable manner. Ethical considerations for this study on TVET college qualifications were based on the following principles (Louw. 2015:263-269):

- Informed consent: Consent was requested from participants and they were made aware that their participation in the study was voluntary and their identity was to be kept anonymous. Additionally, it was for the research only.
- Collecting data from participants: Participants' physical and psychological comfort were considered as this comfort related to how participants' information sharing was protected.
- Dealing with sensitive information: The research did not require any sensitive questions asked to the participants.
- Providing incentives: The researcher avoided promising incentives in terms of the outcomes of the research since she might not get the results she sought.
- Avoiding harm: The nature of the research did not require her participants to recall painful issues or situations.
- Dealing with confidentiality versus anonymity: Participants' identity and sensitive information were protected although questions that were asked did not require any sensitive information to be revealed and their identity which was not required.
- Avoiding deception: Deception was avoided by informing participants in advance about the themes and questions that were addressed, providing them with the opportunity to prepare for a knowledge-sharing interview. There were no incentives provided, however, assistance with transport funds for students that lived far from the site (TVET college premises) was provided.

1.14 CONCEPT CLARIFICATION

The important concepts related to this study needed to be explained as follows:

1.14.1 TVET College

The acronym TVET stands for 'Technical and Vocation Education and Training.' TVET tuition represents a comprehensive term, which refers to an educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life (UNESCO, 2010).

Broadly defined, TVET colleges are concerned with the acquisition of knowledge and skills for the world of work. 'College' is a public or private Further Education and Training (FET) institution that was established or declared as a technical and vocational education and training institution. It can also be a community education and training college.

1.14.2 Qualification

'Qualification' is an official record showing that a training course has been finished, suggesting that necessary skills have been obtained (Cambridge Online Dictionary). The qualification that TVET college students receive at the end of their learning, namely the NC(V) NQF level 4 certificate, is an occupational qualification which is associated with a trade, occupation or professional skill. This occupational qualification result from work-based learning and consists of knowledge unit standards, practical unit standards and work experience unit standards.

1.14.3 Employability

'Employability' is defined as custody by an individual of qualities and competencies required to meet the changing needs of employers and customers, and thereby helping one to realise his or her aspirations and potential in work (CBI 1999). Paadi (2014) concurred with Hillage and Pollard (1998 as cited in Rajab 2015) on the view that employability is having the capabilities to not only apply the knowledge gained at a higher education institution but also being able to acquire, hold and be in a position to acquire new employment.

Employability can also be the capability to move into and within labour markets, and to realise potential through sustainable and accessible employment. For an individual, employability depends on the knowledge and skills they possess and their attitudes. It can also be the way personal attributes are presented in the labour market, including the environmental, economic and social context within which work is sought (DHFETE 2002).

1.14.4 Graduate

The NC(V) programme is framed for those students who choose to exit schooling after Grade 9, affording them a chance at a TVET college (Needham 2013). Within the context of this study on TVET college qualification, graduates represent the TVET college students who had completed a three-year NC(V) NQF Level 4 training. They obtain a certificate and are ready to seek employment.

1.15 ORGANISATION OF THE DISSERTATION

The study is organised into five chapters and contents of each chapter are explained below.

Chapter One

This chapter comprises a general orientation of the research. This includes an introduction to the research and a reflection on the background and motivation for the study. Included in this chapter are the statement of the problem, the aims and objectives of the research and an explanation of the research design.

Chapter Two

This chapter is devoted to a literature study and review on the provisioning of TVET college programmes to afford accessibility to functional employment. The review looks at the literature on progress relating to internship and apprenticeship and the value of technical and vocational training as perceived from an international and a national perspective. It also studies documents and policies related to the quality of the qualification, to gain insight about the problem.

Chapter Three

This chapter consists of a discussion research design and research methodology that was employed to collect data with empirical investigation. Matters that are discussed

include the sample of the study, data collection methods, and the procedure that was followed to analyse and interpret the collected data to find answers to the research question.

Chapter Four

Data collected are reported on in this chapter. This includes a presentation of the empirical research findings that result from an analysis of the collected data which were presented in themes and sub-themes.

Chapter Five

Interpretations of data collected, literature findings and findings from the empirical investigation are dealt with in this chapter. These findings result from conclusions drawn and guidelines developed, culminating in recommendations that are focused on contributing to an improvement of the relevance of a TVET college qualification for functional employability.

1.16 SUMMARY

This chapter discussed the graduate model and what it entails. Firstly, it shared the author's view on the model and its limitations, as well as its implications. Secondly, it showed relationships among all five capitals and how they are all interdependent on one another. Thirdly, it highlighted the capitals that are pertinent to the study, namely human, social and psychological capitals. These three are suitable because they address the problems highlighted in this research. Also discussed in this chapter was the applicability of the graduate capital framework to this research study. The scope limitations of this chapter were the study that did not focus on all five capital models but on the three that were deemed relevant to the study.

The TVET college sector has an important task of capacitating students with knowledge, skills and behaviour needed for employability. To fulfil this task, constructive liaison was needed between employers and the sector. An overview of the theoretical framework for this study – "graduate capital," comprising relationships among college principal, employer and the graduate, was applied. This framework portrayed that social capitalism could only be achieved if good networking and proper contacts were established. However, a relationship that exists between the college principal and the employers in Mpumalanga does not seem to have yielded much in

terms of employability of the college graduates. Therefore, this calls for so much more to be done for employers to acknowledge TVET college graduates' qualifications.

Concerning the relevance of a TVET college NQF Level 4 certificate, questions around the qualification are about its proficiency for graduates to acquire employment concerning modules offered by the TVET colleges. In the researcher's opinion, the response to this question is a 'YES'. However, the content of these modules may not be necessarily what employers consider as useful for employment in their industries.

In a report released by the Human Sciences Research Council (HSRC) (2011) on skills supply and demand in South Africa, 21 000 students completed and passed the NC(V) Level 4 examination in 2015. However, Reddy (2016) notes that the employment growth rate in South Africa has not been enough to absorb the large number of youths entering the labour market for the first time, which emphasises that graduates from TVET colleges are not adequately accommodated in employment (Reddy 2016).

The desperation of these students to attract employment is valid and based on the principle of demand and supply, the relevance of their qualification must be worthy of the scarce employment opportunities available in companies in the Gert Sibande District. What they need from industries are employment opportunities to apply the knowledge and skills acquired from TVET colleges and a chance to further develop those skills in the world of work.

The next chapter will present a review of related literature on issues and debates raised by scholars on graduates' employability both locally and internationally.

CHAPTER TWO: REVIEW OF LITERATURE

2.1 INTRODUCTION

The previous chapter comprised a general orientation to the research. This chapter presents a review of related literature in the context of the study. A literature review involves reading, evaluating and summarising all the literature that one may have access to regarding one's research topic (Howard 2015). Howard (2015) added that literature review not only puts current research study into perspective but also determines what other scholars have written about it in the selected field of study, as well as to enhance and refine the selected field study. The literature review for this study was carried out on TVET college graduates' employability and was guided by the conceptual framework during the literature search.

The following databases were used**:** EBSCOHost, Academic Search Complete, Education Source, ERIC, Library and Google Scholar.

Literature search terms: The following literature search terms were used: TVET colleges, graduates, employability, skills, qualifications and industries.

2.2 GEOGRAPHICAL AND DEMOGRAPHICAL DESCRIPTION OF SOUTH AFRICA

The map in figure 2.1 shows the location of the study and where the college in the study is situated, while figures 2.2 and 2.3 show where most of the mining fields and industries are located. Geographically, South Africa is located at the southern tip of the continent of Africa. Its neighbouring countries are Lesotho and Swaziland (now eSwatini), then Botswana and Zimbabwe in the far north. Namibia is in the north-west and Mozambique on the eastern side, as indicated in figure 2.1. South Africa has a landmass of 1,221,037 square kilometres. It has four racial groups, namely Africans, Whites, Coloureds and Indians (or Asians). Africans are the predominant race. The country has eleven (11) official languages, namely isiZulu, isiXhosa, Afrikaans, English, Sesotho, Sepedi, Setswana, Xitsonga, Siswati, Tshivenda and isiNdebele. The population, according to findings of 2011, was estimated at 85 million and ranked 25th in the world (Census 2011).

South Africa is one of the richest countries in Africa with the largest number of mines as indicated in figure 2.4. Mining is a predominant activity in the country and the largest coal deposits are situated in the province of Mpumalanga. This coal is a raw material

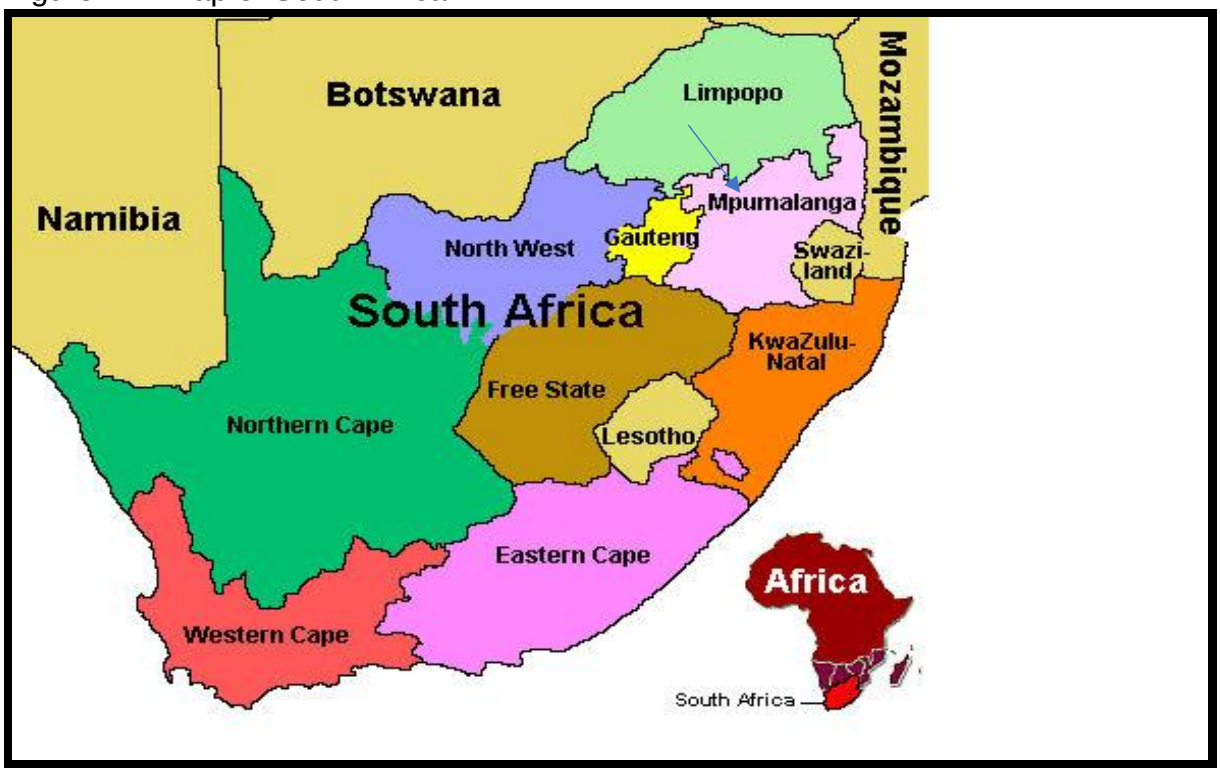
that is used to produce products such as plastic, gas, fuels, fertilizers, electricity, chemicals and explosives. This is a province with various career options for youth to explore. TVET colleges in this region must be able to facilitate such programmes to allow career paths for the youth.

2.2.1. Geographical description of Mpumalanga province

South Africa is made up of nine provinces, namely Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal, North West, Gauteng, Mpumalanga and Limpopo. Mpumalanga is a province on the eastern side. It borders Limpopo province, eSwatini and Mozambique. Mpumalanga mining accounts for 83% of South Africa's coal production and there are 68 Coal mines in the province (coal-mining-in-south-africa.htm).

Mpumalanga, as the arrow in figure 2.1 shows, does relatively well with lots of mining sites in the area and with South Africa having a valuable quantity of minerals such as chrome, coal, gold, iron ore, nickel and platinum group metals (PGM), it has become a highly sought-after business destination. The province has three power stations that are powered by coal mines in the region and are in the town of Ermelo, another between Middleburg and Bethel, as well as between Komati and Balfour. The combined operating life of these three power stations is 15-20 years. This shows how much potential this province had with regards to employability and skills development.

Figure 2.1: Map of South Africa



Source: www.mapofworld.com

On account of high coal deposits in the province, South Africa produces about 224 million tonnes per year and the country is ranked seventh world producer of coal after China, USA, India, Australia, Indonesia and Russia (Africa Mining IQ portal 2019). Mpumalanga, as a province, has enough resources and various companies, along with lots of coal mines geographically located. Figure 2.3 shows one of these mines, possible careers and potential employment for TVET college graduates. Therefore, TVET training providers must be able to offer programmes that are related to mining and engineering programmes since these are pre-dominant skills required in the province.

Some of the skills that can be offered at NQF mid-level qualification are toolmaker, fitter and turner, pressure welder, boilermaker, diesel mechanic, millwright, just to name a few. Referencing to the selected Gert Sibande TVET College, only two of these are offered, namely “Electrical” and “Fitting and turning”. Figure 2.2 below shows three sub-regions of Mpumalanga with Gert Sibande being the region where most mining takes place. This study focused on Govan Mbeki Local Municipality in the Gert Sibande District Municipality.

Figure 2.2: Geographical map of the province of Mpumalanga

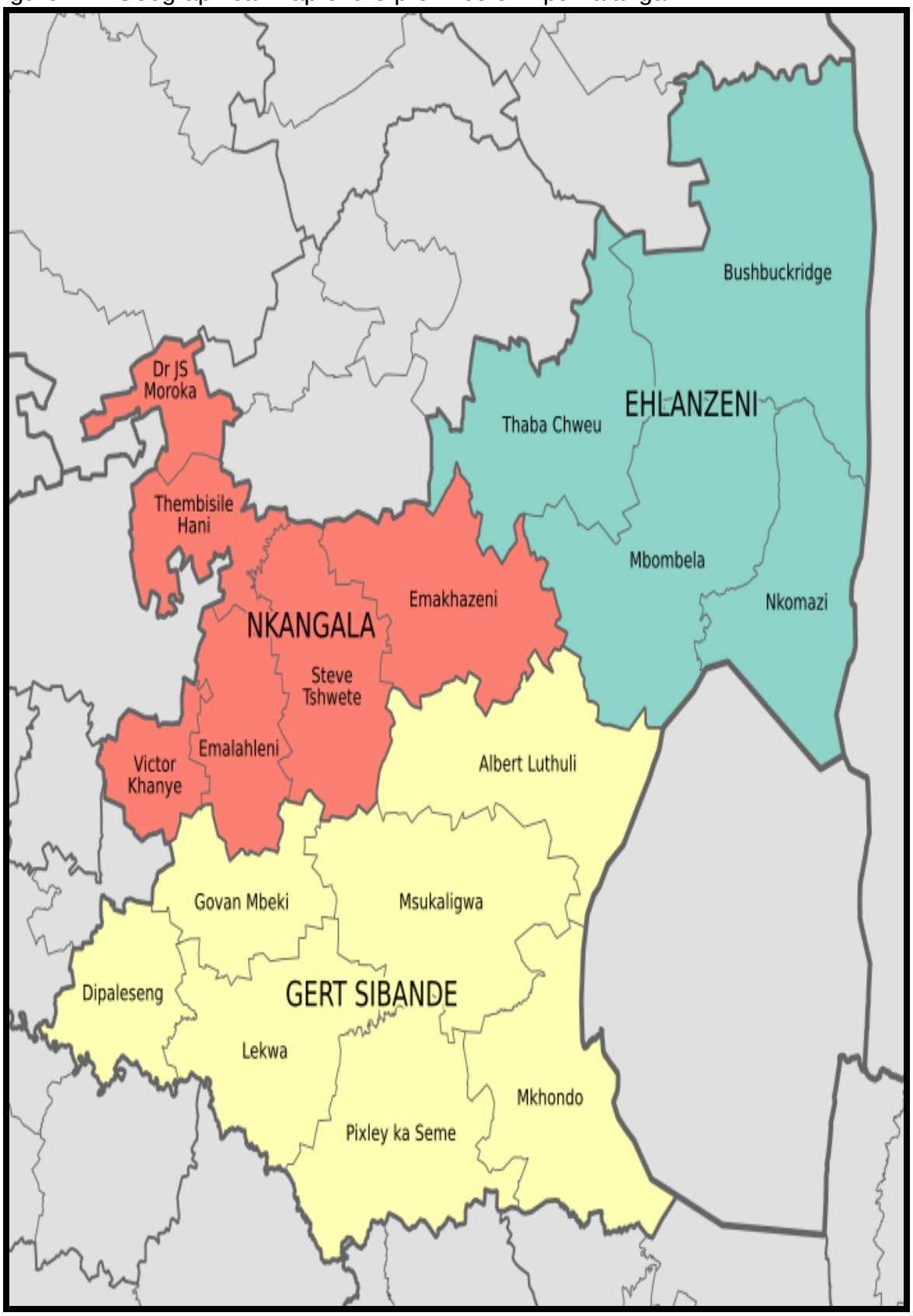
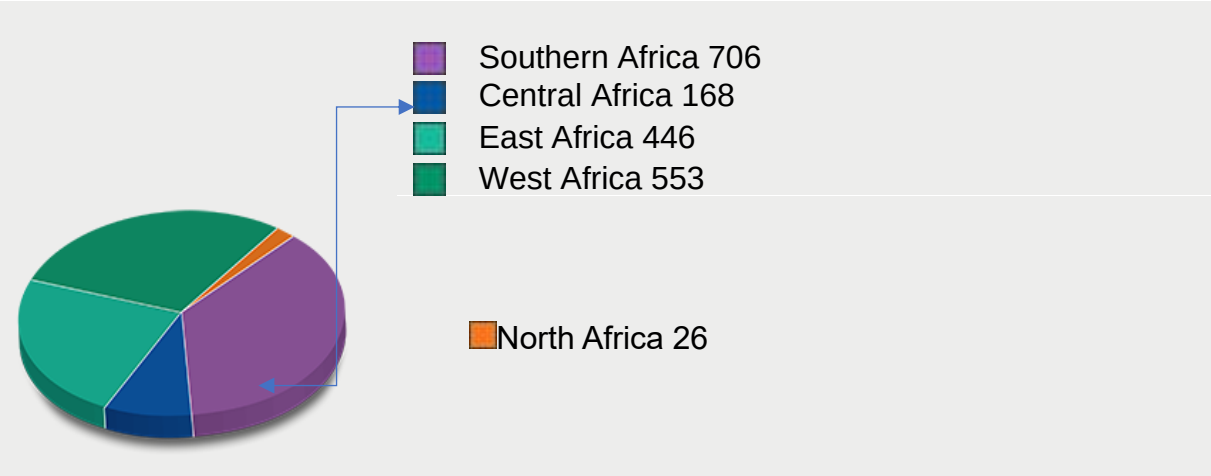


Figure 2.3: Picture of a coal mine in Mpumalanga

Figure 2.3 above shows one of the coal mines in the region. Looking at the picture, there are various career options that one can relate to, but the question is how many do TVET colleges offer. Although industries require very highly skilled and qualified graduates who could be productive in the field, TVET colleges must be able to provide industries with graduates who have a mid-level-qualification (certificate/diploma). If graduates are awarded an internship in the industries, this would allow additional training and they would improve on their human capital, thus making them more productive and highly skilled for the industry. This would be a good return on investment for the government. Therefore, the TVET colleges in this region of Mpumalanga must offer relevant careers and qualifications that will cater to the needs of mining skills, particularly artisans.

Figure 2.4: Africa Mining IQ covers Africa



Africa Mining IQ is the most in-depth resource of actionable mining intelligence in Africa that's used by companies large and small to target new business.

Figure 2.4 above shows Africa Mining IQ, where companies large and small target new business venture. The Africa Mining IQ is an online intelligence service which is powered by projects IQ. They also supply mining project information in Africa which is accurate and reliable. South Africa, being a country rich in minerals and mines, requires highly qualified skilled labour to function in these fields. TVET college graduates with mid-level skills would be able to function in some of these fields. It raises the question why there is a high rate of unemployment in the Gert Sibande district while most of these mines are situated there.

2.3 TVET COLLEGES IN THE SOUTH AFRICAN HIGHER EDUCATION SYSTEM

The period of reconstruction (1994-2003), which was the first period of post-apartheid, evoked the need for skills development legislation and the formation of 50 new Further Education and Training (FET) colleges. They were formed by merging previous Technical Colleges with Colleges of Education and Training centres. These FET colleges were conceived to be the resolution to the struggle of economic, political and social contradictions inherited in the struggle for freedom (Powell 2013). These colleges were also likely to be the drivers of the skills needs of the country's economy and to provide higher-level skills needed for economic growth, and those skills acquired would compete in the global economy (Republic of South Africa (RSA) 1998).

According to Badroodien and Kraak (2006), high-quality and relevant education and training would provide skills and attitudes required for employability, without including

lack of insufficient jobs in formal economy and training for entrepreneurship. Colleges also played a very important role of providing second-chance and non-traditional access routes to higher education (McGrath 2010). This background gives a fair understanding of why South Africa has TVET colleges to address the skills shortage in the country's labour market. In a report published by Labour Market Intelligence Partnership (LMIP 2016) on skills demand and supply, South Africa experiences high levels of unemployment which exacerbates inequalities. However, the biggest challenge is how new jobs would be created to absorb the unemployed (LMIP 2016). The unfortunate issue is that Mpumalanga province has been ranked among the economically poor-performing provinces due to lack of economic and employment opportunities LMIP (2016). For this reason, the need to create new jobs or absorb the unemployed in the available companies has become essential.

The LMIP report (2016) further found that the highest level of unemployment, 45% of them being youth, are either unemployed or discouraged job seekers. Secondly, 60% of the unemployed has less than a Grade 12 certificate. Consequently, there is a need to have multiple skills policy responses to raise education and skills levels, for an expanding, innovative and productive labour force. Although, Aitchison (2018) found that most polices, especially within the South African government that has tried the reconstruction of TVET colleges in order to solve the issue of unemployment, has fallen short of their promises due to budgets that constantly drown this endeavour. The TVET colleges would have played a positive role in offering differentiated skills programmes, especially for those with less than a Grade 12 certificate if there were more occupationally directed programmes for areas needed in the labour market, creating opportunities for the unemployed (LMIP 2016). The next section brings to the fore definitions of TVET.

2.3.1. Meaning of TVET

Technical and vocational education and training (TVET) refers to those aspects of the educational process that, in addition to general education, involve the study of technologies and related sciences, acquisition of practical skills, understanding and knowledge relating to occupations in various sectors of economic and social life as cited in a thesis (Bangalu 2015). It is important to note that TVET systems in Africa differ from country to country (African Union (AU) 2007). In all Sub-Saharan Africa, TVET formal programmes are school based, for instance, in South Africa NQF has

been established to provide a mechanism for awarding qualifications based on the achievements of specified learning outcomes prescribed by industry (AU 2007). UNESCO pointed out that TVET focuses on ‘acquisition of knowledge and skills for the world of work’ (UNESCO 2012:5). This term embodies and draws on the elements of historical educational terms such as 'apprenticeship training', 'vocational education', 'technical education', 'workplace education', and others. UNESCO (2012:5) however, recognised the ongoing conceptual debate around the definition of TVET, including the use of other terms such as “technical and vocational skills development (TVSD)”.

Dike (2009) as cited in Legg-Jack (2014), defined technical and vocational education as an aspect of training which leads its recipients to acquisition of competencies as well as scientific knowledge. However, technical and vocational education is also understood as an education that familiarises its learners with practical knowledge that can yield national gains (Audu, Musta’amal, Kamin, & Saud 2013), as cited in Legg-Jack (2014).

Having considered different meanings of TVET, the next section investigated the national objectives of the TVET in South Africa.

2.3.2 National objectives of TVET in South Africa

In 2009, a new Department of Higher Education and Training (DHET) was established in South Africa as an important step towards the goal of integration. It was given the responsibility for higher education, further education and work-based skills in the DHET. DHET also provided an opportunity to build a single coherent, differentiated and highly articulated post-school education and training system (DHET 2011).

Continuous debates on South Africa’s skills sector and on FET colleges to assist with the shift in socio-economic development policy that the South African government had adopted, with a strong commitment to South Africa’s poor and the marginalised, are a never-ending process. Additionally, there is a new economic policy committed to creating decent work and promoting inclusive economy (DHET 2011:4).

The above-mentioned commitment to improving lives prompted three areas of concern for (DHET 2011: xi):

- The large number of young people who are not in education, employment or

training (NEET). They are approximately 42% of youth aged 18-24 years (Cloete 2009).

- The persuasive and persistent pattern of inequality of race, gender and class which is a beacon of South African society and promotes access and success in education and training.
- The disjuncture between education and training and the skills' needs of the economy, and the failure of FET/TVET colleges to produce productive citizens hoped for South Africa's skills revolution.

The then minister of DHET, recently reappointed for the second term, Dr. Nzimande, speaking at a FET summit, stressed that the orientation of public FET colleges was towards the needs of the poor (DHET 2010). In the context of this statement, the policy shifted from the role that colleges played of delivering skills required for economic development with poverty reduction to increased equal access to colleges (McGrath 2011 as cited in Legg-Jack 2014). This shift may have posed the question whether this very notion has led to the high number of unemployed youth and with skills that are not responsive to the demands of industry.

2.3.3 Quality assurance

Quality assurance is seen as an organised process for ensuring and maintaining quality Kis (2005 as cited in Bangalu 2015) and securing accountability (Harvey & Newton 2007). As described by Black (1990 as cited in Bangalu 2015) quality assurance provides appraisal of the degree of quality of work offered. Quality assurance serves various purposes in TVET such as improving the quality of TVET delivery, system effectiveness and higher quality TVET outcomes (Bateman, Keating & Vickers 2009 as cited in Bangalu 2015).

As noted by Kuboni (2002 as cited in Bangalu 2015), quality assurance of the national vocational qualification is an essential component in the TVET system because it includes standardisation of TVET provision by TVET providers, the industry and the economy, both nationally and internationally (Yakubu 2003a as cited in Bangalu 2015). Periodic monitoring and supervision of the TVET sector are necessary (Yakubu 2003a). Achieving quality in TVET must require quality-assuring authorities to set standards and ensure periodic monitoring and supervision of the TVET sector (Yakubu 2003a).

According to Kuboni (2002), quality assurance involves various activities and processes which may include teaching and learning materials, teaching methods, lecturers, learners, college governance and any other factor that could influence the quality of the system (African Union, 2006). Basic processes of assuring quality in education and training systems include assessment, accreditation, auditing, monitoring, registration of standards and qualifications (RSA 2001; RSA 2008; RSA 2012; Kis 2005; Harvey & Newton 2007; Anderson, Johnson & Milligan 2000; Yakubu 2003b as cited in Bangalu 2015).

According to Harvey (2004 as cited in Bangalu 2015), accreditation refers to the process of establishing status and readiness of a programme or institution of learning. It involves determining the capability of an institution to run programmes with respect to facilities and personnel. In several countries, accreditation is a process of ensuring and maintaining quality in education and training (Kis 2005). Eaton (2012 as cited in Bangalu 2015) referred to accreditation as a process of quality re-examination used to inspect institutions and programmes for quality assurance and improvement.

The roles of accreditation include assuring quality, improving articulation and facilitating transfer, creating confidence, and facilitating access to government grants (Eaton 2012). Qualifications obtained from fully accredited institutions are favourable with employers for graduate employability. In South Africa, the bodies assigned with quality assurance are Council for Quality Assurance in General and Further Education and Training (Umalusi), South African Quality Council (SAQC) and Higher Education Quality Council (HEQC). In the researcher's opinion, the reason TVET college graduates seek to study further and enrol for diploma courses (NATED), is because the graduates question the accreditation of the NC(V) qualifications. The NATED qualifications are accredited and favourable with employers and NC(V) graduates.

2.3.4 Funding of TVET colleges in South Africa

The Department of Higher Education and Training (DHET) fund and equip TVET colleges around the country. Primarily, enough provision for funding allows for a quality TVET qualification and equally important is the need for a funding policy and how such a policy is implemented. This is crucial to TVET education. However, this varies from country to country with regards to their national economic priorities. Funding policies and mechanisms include public funding, training fees, private funding, international

assistance, industry support and funding support from non-governmental organisations (Atchoarena & Esquieu 2002; Bolina 1996; Atchoarena 1996; Afeti 2009 as cited in Legg-Jack 2014).

The principal source of funding for TVET tuition in most countries is government, with supplementary support from a range of organisations, bodies and individuals. Levies imposed on enterprises as a form of taxation, aid in generating funds for TVET support and promotion of skills development (Afeti 2009). This is the case in South Africa. Training funds outside of normal government allocation are supported utilizing levies on organisations, businesses or industries and by donations from one source or another (Johanson 2009 as cited in Bangalu 2015).

The core of all social and economic development is dependent on quality education offered at TVET colleges, however, adequate funding is the foundation on which it relies. The provision of suitably qualified staff, teaching and learning materials depend on adequate funding of the TVET sector. Moreover, teaching and learning materials and equipment in the TVET sector are expensive. Notably, when funds are lacking to procure up-to-date teaching and learning equipment for TVET colleges with either dated or insufficient equipment deemed essential for certain Engineering programmes, this compromises the skills required by graduates who exit the TVET college for employment (Kingombe 2011; Oketch 2007).

In reference to the above, that was the case in the selected TVET college in Mpumalanga. The selected TVET college is in desperate need of workshop equipment, and if good relationships are not formed with the industries in this area, so that these industries may assist the government in equipping TVET college workshops, then most of the TVET graduates will exit or have exited the college with insufficient skills for employment. The national TVET bursary scheme of South Africa funds students' educational needs, as well as their transport and accommodation, which is a very much needed help for some of the students in the province.

2.3.5 Status of TVET colleges in South Africa

The status of the South African TVET colleges has remained stagnant, if not the same. LMIP (2016) report noted that the level of education in South Africa is lower than in most economically productive countries. Thus, these poor outcomes in the schooling

systems have a major impact on the quality of students that choose to enrol at TVET colleges or universities. This affects the number of TVET college completers who can provide useful skills set to support economic growth, making it fewer than the enrolled (LMIP 2016). Most of the TVET college students do not progress successfully through their courses and programmes, thereby narrowing the pool of a highly skilled workforce.

From the analysis done by LMIP (2016), three types of mismatch were identified which are related to skills and the economy. This implies that there are various types of imbalances between skills offered and those that are needed in the world of work. These skills are educational-supply mismatch, demand mismatch and qualifications-job mismatch. The implication is that there would be less qualified people (qualification gap) in the case of qualification-job mismatch. For those with TVET college qualifications, the minority of them worked as technicians and associate professionals (LMIP 2016).

South Africa has 50 public TVET colleges offering various programmes. Even though there is an increase in quantity, the quality has gone down. Several reasons are attributed to the decline in the quality of the education, according to Maree (2018), namely:

- South African public TVET colleges are mediocre
- Poor quality of lecturers
- Dated machinery that does not exist in current industries
- Low placements of their students in firms while receiving training (Gafieldien 2016).

Harmse (2017) added that Minister Nzimande mentioned that the current status of TVET is that there are unqualified lecturers, mismanagement of colleges, inadequate funds for students from the National Student Financial Aid Scheme (NSFAS) and, also, late payment of allowances for accommodation and transport.

All these issues affect students' performance and as a result, the government has to address them by having good governance in colleges, empowering lecturers and having a workable plan to recover the money it spends on TVET college students, since there is no expectation of them ever paying it back after they acquired employment. Even with governments' strong commitment to grow the TVET sector in South Africa, the quality, in terms of delivery, has remained low and even deteriorated

(Loynes 2019). Loynes (2019) also noted that the lecture-student ratio has changed from 1:20 in 2002 to 1:55 by 2012 (HSRC 2014).

2.3.6 TVET colleges facilities and equipment

Referencing to Gafieldien (2016), on some of the issues affecting many TVET colleges, such as outdated machinery and lack of successful placements of students to industries, a very dim situation is presented for most colleges. Government had hoped that colleges would be adopted by industries so as to offer the much-needed practical opportunities and assist in developing the teaching-learning material as well as build an institutional management capacity for TVET colleges (Ramaphosa 2015).

A partnership that is close to ideal is the one between Sasol and Gert Sibande TVET College, which launched artisan skills development programmes for young people of Secunda in June 2014. The fields catered for are electrical engineering, civil engineering, and fitting and turning. It has brought hope to young people of this region although the capacity it offers is not large enough to facilitate the number of graduates that complete their qualifications. This study explored that partnership in order to have a better understanding thereof. The partnership requires the Sector Education and Training Authority (SETA) to do quality assurance of programmes offered, while Sasol provides funding and on-the-job training. The college is responsible for teaching and training (Loynes 2019).

Most of the colleges are not this fortunate, they have to rely on provincial education departments' budgets or donor funds or National Skills Fund (NSF) of Trainees' contribution fees.

2.3.7 Organisation and administration of TVET colleges

One of the prerequisites that have to be met, according to Berhe (2011), is the presence of active management, especially human resource management. Individuals need to be managed the same way materials, equipment and information are managed. If quality was to be pursued and achieved in TVET colleges at all levels, then consideration must be given towards constituting a board with highly competent administrators and supervisory personnel to oversee the affairs of TVET in the state.

Part of the challenges encountered in the implementation of TVET college policies are its principals who place emphasis on general education, as such inhibiting the relevance of other TVET college vocational programmes. The drive was to have practical work incorporated in TVET tuition or equipping workshops with up-to-date equipment (Akamobi 2005).

2.3.8 TVET curriculum reform and development

The development and provision of technical and vocational education and training in South Africa has been greatly influenced by the social and economic policies of the apartheid regime (Akoojee, Gewer & McGrath 2005; McGrath & Akoojee, 2007 as cited in Papier, 2015). Apartheid's legacy of democratic South Africa encompassed economic inequality, poverty, restricted employment and low-quality skills development (Seekings 2007 as cited in Bangalu 2015). Poverty is rooted in unemployment, as Seekings (2007:15) lamented:

> *"… low-quality schooling, poor links into urban and industrial labour markets, and the growing capital-intensity of production in most economic sectors resulted in the growth of unemployment among unskilled workers and of mass poverty among them and their dependents."*

Skills development has been recognised as a viable tool for meeting both social and economic aspirations in South Africa (Akoojee, Gewer & McGrath 2005; RSA 1998). Objectives to expand and provide skills necessary for employment has led to legislative approvals of skills development laws and initiatives, which include the Skills Development Act No. 97 of 1998 (RSA 1998), National Skills Fund (NSF) and Accelerated and Shared Growth Initiative in South Africa (AsgiSA) (RSA 1998; McGrath & Akoojee 2007), among others.

An initiative for South Africa, AsgiSA envisioned that halving poverty and unemployment would be through improved economic empowerment and growth rate. That included facilitating equity in employment, nonetheless, considering post-apartheid reforms in education and training system are mechanisms to address injustices perpetuated during apartheid regime as the education and skills of new entrants to the labour force are of great importance in shaping ways that inequalities evolve over time (Seekings 2007).

Research has found that TVET college practices incorporate activities, mechanisms, innovations and strategies undertaken to deliver a particular outcome and has proven to be effective in reforming, developing, promoting and improving TVET. UNESCO/UNEVOC (2010:1) indicated that:

> "*A best practice is a technique, method, process, activity, incentive or reward that is believed to be more effective at delivering a particular outcome than any other technique, method or process. … A best practice in one country may not necessarily be a best practice in another country, but most importantly it provides viable lessons and resources to learn from".*

In TVET colleges, best practice examples may include administration or management issues, national qualifications frameworks, integration of ICT in learning and teaching, integration of education for sustainable development (ESD), HIV/AIDS education, innovations, and TVET skills development for poverty reduction.

However, it is important to note that countries have different practices intended to promote and improve the development of skills necessary for employment. The African Union (2007) observed that the need to link training to employment, whether self or paid employment, is the core of all best practices and strategies observed world-wide. TVET practices in one country could provide the basis for improvement in other countries. This show that countries could learn from one another if they shared their best practices.

The African Union (2007) identifies different TVET practices employed by different countries to transform and develop technical and vocational education and training systems in their respective countries. In South Africa, practices and innovations for quality assurance include the NQF, SAQA and SETAs.

2.3.9 TVET colleges education of lecturers

The quality of TVET college lecturers determines the quality of TVET college qualifications, programmes, delivery and systems. The quality of TVET lecturers determines the delivery of quality TVET programmes, as well as the quality of TVET education (Baffour-Awuah & Thompson 2012). The educational quality of teachers is fundamental to all kinds of education and training globally (Ololube 2008 as cited in

Bangalu 2015). This determines the quality of graduates that exit the TVET college at NQF Level 4.

The quality of lecturers affects the quality of education and training offered at a TVET college. Therefore, it is essential for lecturers to be adequately prepared. Fareo (2013 as cited in Bangalu 2015) alluded to lecturer-education development being prioritised. The quality and performance of TVET college lecturers have to be improved through partnerships with industries. UNESCO (2012) noted that the collaboration between industry and TVET college lecturers was established to allow lecturer competence and promote the provision of responsive TVET programmes.

2.3.10 Staff development

TVET colleges face undeniable challenges in teaching the subjects allocated in the TVET curriculum as it is expressed as one of the reasons why TVET colleges experience poor performance (Gafieldien 2016). Staff development for the novice and trainee TVET college lecturers who need to be ready, motivated and able to teach, is a necessity.

Shulman and Shulman (2004) stressed that accomplished learning and teaching depend on the provision of adequate resources, namely mentoring of staff development, curriculum and associated materials, instruments and models of assessment, additional personnel, computers, physical space for groupings and rotations, and much more. Besides being ready to teach, they argued that they had to also understand what was taught and how to teach it, be able to engage in appropriate performance and able to learn from experience through reflection. In addition, they argued that this was the provision of metaphoric capital entailing curricular, cultural or moral, technical and venture capital.

WIL is one of the several terms to describe an education experience largely based on experiential learning theory devised (Kolb 1984 as cited in Taylor 2013). Kolb's experiential learning cycle, attributed to Dewey's work, involves a cycle of learning which includes experience, followed by reflection on it, the making of generalisations and applying learning back into practice. WIL has been applied in a wide variety of vocationally orientated education settings, including engineering, business and teacher education.

Internationally, vocational education and training (VET) lecturers and trainers are expected to have current industry knowledge and experience, but industry WIL is usually not a component of initial VET lecturer training (RSA 2008b; Papier 2008).

2.3.11 Relationship between TVET colleges and enterprises

One of the government policies, the White Paper on Post-School Education and Training (2013) insists on the need for public TVET colleges to have strong relationships with the workplace in order to improve learners' chances of obtaining practical training experience and long-term employment.

According to recent research done by Papier, Needham, Prinsloo and McBride (2016), they found that relationships were not so strong, and companies have specific requirements where they expect new entrants to acquire a range of practical, academic and attitudinal skills for them to be employable. In addition, they would expect the formal college syllabus to cover the basic academic and practical training needed.

Relationships between the selected TVET college in Mpumalanga and the companies in the region are not solid, and the companies are wary of the NCV syllabus because the NC(V) programmes do not provide students with enough practical skills (Papier et al. 2016). However, there has been one partnership that was formed between Gert Sibande TVET College and Sasol in Mpumalanga. The tripartite consists of the relevant SETAs, Gert Sibande TVET College and Sasol (Loynes 2019).

The partnership is expected to serve students by training them in the skills that the company requires with the hope of adopting these students as their employees. The TVET college is responsible for the tuition and programme logistics while the company is responsible for funding as well as on-the-job training, and the SETA is responsible for quality assurance and accreditation of the programme. In addition to this, students receive their trade test qualification as artisans, which open doors to employment at any industry that is relevant to their trade. Unfortunately, this venture accommodates only a few students, 30 to be exact. Many lose out on this opportunity.

2.3.12 Internships/apprenticeship and co-operative work placement

South Africa is a country that can invent and produce and not just be a consumer of goods. It has established excellent centres that enhance expertise within the

manufacturing sector across the country that must be led and driven by industries (Johnson 2019). In his article in the TVET College Times, Johnson added that research has found that if the government and industry sector worked together to transform skills, productivity and stimulate innovation, it will attract investment in the country and make it a global leader in advanced manufacturing.

That is why the government believes in the capacity of an apprenticeship system to enhance expertise to eliminate skills shortage is essential to South Africa. Engineering businesses are key role-players in the training of apprentices hence the training requires employers, engineers and the passion of one's business to bring learning to life (Johnson 2019). He continued to say that there are benefits for businesses getting involved. The short-term plan for businesses' involvement is an increased awareness of the business, its products and services in their local area. The medium-term plan includes promoting a positive image of their company within their community. The long-term plan, which may be possible solutions to their company problems, could be introduced by fresh thinking from younger people and access to a larger local pool of engineering recruits and apprentices for the business community.

Johnson (2019) concluded by saying that apprenticeships can attract high calibre of staff and lead to a more motivated and committed workforce that stay longer, thereby cutting recruitment costs. They could also gain skills and knowledge that enables the industry to work better and quicker. They could also fill any skills gaps in their workforce, as well as introducing new techniques and technology to increase productivity. Introducing young, enthusiastic apprentices into the company may have had positive effect on the business, encouraging a culture of wanting to learn (Johnson 2019).

2.3.13 Industrial-TVET college collaboration

Collaboration with industries would not only lead to curriculum development and improvement, but it could also improve the quality of education and training, and provision of scholarships (Majumdar 2008). Although collaboration with industries was developed as a means of developing and improving the quality of training given to students in TVET institutions, this process of involving the industry in total education and training system has not been easily accepted by the industries. Many industries have not adopted this mechanism for developing and improving students' practical

skills. It would have also been helpful for placement of students in industries to acquire workplace experience under an industrial attachment scheme.

As noted by Borkar and Paturkar (2013), collaboration between industry and training institutions also provide opportunities for the industry to participate in curriculum and programme development. If the TVET sector was to be more responsive to the needs of industries and the economy, industries' participation in designing TVET programmes and curricula were strongly required. Industry sector involvement would help ensure that the skills required by industry are reflected in the curriculum and by so doing, it would make the curriculum demand-driven and be based on industry standards. As a result, industries would enable TVET institutions to offer programmes required by the industry and the economy, resulting in possible employability.

2.4 GRADUATES' EXPECTATIONS

Most of the students that enrol at the TVET college in Mpumalanga have the perception of TVET college institution being an 'inferior' institution as opposed to completing a matriculation certificate (Puckett, Davidson & Lee 2012). The sense is not necessarily shared by all students, as Needham and Paper (2011) noted, that while students sociologically associate TVET colleges with lower status employment, some of the school and college students see TVET as a superior form of education that may bring employment. Needham & Papier (2011) went on to illustrate that students' view of TVET colleges is not unsophisticated.

In contrast to the views of school learners, who may or may not have heard about TVET colleges, respondents who are at a TVET college had a positive attitude towards TVET tuition, their involvement in the chosen programmes and the career potential provided. The positive attitude is attributed to the practical element of TVET college programmes, which contributed towards an understanding of theoretical components. TVET college students believe that TVET colleges provide better labour market entry and employment prospects because of the vocational approach and practical workplace learning and experience (Needham & Papier 2011). Papier (2009) differentiated between three categories of students, namely those who are idealistic and future-focused, those who are interested in occupational field and those who were in a programme by default.

The first category identified as a series of common reason for registering at a TVET college Papier (2009:24) and Ebrahim (2013:9) are:

- The desire to improve their standard of living
- To find a good job
- To fulfil their dreams for future success
- to develop careers
- To become ‘something in life’

The assumption of most young college leavers rates their graduation certificate highly as a visa for engagement in the world of work. This may not be unconnected with high earnings within some sectors of the economy. A great number of graduates leave with the impression that when they get employed, they are highly placed and are entitled to huge remuneration.

The second category has the excuse to work ‘in an office’ or ‘work with computers’, or wanting to ‘become a qualified electrician or artisan’ and the third category of students resulted in being at college and or in the programme by default or not being able to register at a university (Papier 2009). It also included negative attitudes towards school and financial considerations.

A significant point made by Papier (2009) in the research done was most of the registered learners knew what career they wanted and were interested in the occupational field they chose. The criticism they noted acted as motivator. Reasons for individual decisions on entry into a TVET college are illustrated in a study on student attrition (Lawrence 2016). This study was on NC(V): Civil Engineering and Building Construction students, conducted as in-depth interviews and findings showed that the desire to enter the building industry featured strongly. Indications of always wanting to be a construction worker and great admiration of people working on construction sites were strongly expressed by some of the participants of NC(V) programmes. Lawrence (2016:73) also noted that the interviewee stated:

> *‘I would personally recommend the program to students who are currently at school and who are planning to leave when they finish grade 9. There are some minor things that the College can look at as well as the huge amount of theory work that the program has. If that can be revised and more practical combined*

into the program, then I am sure many more would remain in the program as I did.'

From his interviews, Lawrence (2016:85) identified support received from the college accompanied by understanding college procedures as key reasons for programme completion. He identified the following as reasons for early programme departure:

- Feelings of isolation and low levels of satisfaction measured against their experience, accompanied by low levels of engagement with peers and college structures was a common experience for many students. This issue was identified in some of the students as the cause for student dropout in higher education in South Africa (Savage, 2001; Koen 2007), and was shared by students at college level in other countries (Sefa Dei, Mazzuca, Mclsaac & Zine 1997; Cook & Rushton 2009).
- Curriculum contents, for one of Lawrence's (2016) interviewees who expressed discontent since they expected to do more practical work in the NC (V) programme, but it was so much of theory and so little practical.
- Programme administration took too long to be published and in one case the lag resulted in a student not being able to obtain funding for the next year of study. Other factors were personal financial constraints and economic pressure, as noted in another, that external funding provided to him for his studies was absorbed into the extended family's consumption budget, with an inevitable negative result for his studies.

A study was recently conducted on programme completion in a Business Studies programme at a TVET college in the Western Cape. Gaffoor (2018:75 -79) noted that:

- 70% had knowledge of the TVET college programme and what they would be studying prior to registering and gained the knowledge from receiving career guidance.
- 89% indicated that they had struggled at secondary school.
- 78% entered the TVET college programme intending to use it to enter higher education.
- 91% noted that their entrance to the TVET college programme was motivated by prospective employment.

- 83% noted that TVET college assistance in finding employment after graduation influenced their decision to complete their programme.

TVET college students, when interviewed, clearly were aware of choice parameters available to them and expressed their views on their level of satisfaction as TVET consumers. Customer satisfaction is the 'perceived discrepancy between prior expectations (or some norm of performance) and the actual performance of the product as perceived after its consumption' (Tse & Wilton 1988). In the case of the Mpumalanga TVET college, they fall under the category of 91% who are motivated by prospective employment.

2.5 LECTURERS' EXPECTATIONS/PERCEPTIONS

A key element of responsiveness is that colleges should better understand their local labour environments and service their needs with regards to employability. Too many colleges have been producing graduates in trades that are already swamped or where there is no local market. This is a problem for some colleges in Mpumalanga, given the apartheid-driven logic of their locations. However, it was equally important that colleges are aware of possibilities of training for appropriate regional, provincial, and labour markets (King & McGrath 2002). Internationally, colleges are developed out of a need for theoretical enhancement of on-the-job training of youth workers. Several other programmes have sought to provide additional training, often theoretical, to those employed in the informal sector, alongside their conventional offerings (King & McGrath 2002). But for those not employed and hoping to attract employment, the need to have both the theory and practical component were deemed to be of high priority.

2.6 EMPLOYABILITY

The term 'employability' refers to a category of skills which are demanded from an individual to effectively participate in the current world. Employability has its bearing on both those engaged with any kind of job and those that need an improvement in their jobs. According to Rees, Forbes and Keble (2006), these skills and other related attributes that enrich a person's employability, are in most cases those which form the foundation of learning and application of a subject area.

Rees, Forbes and Keble (2006) go further to remark that skills such as the ability to analyse data, to solve multifaceted problems and to communicate outcomes effectively are frequently applied in both academic and employment processes. Harvey (2003) denoted that employability is beyond getting a job, developing the attributes or experience just to enable a student to secure a job or progress within a current career. Employability, according to Harvey, is all about learning and the emphasis is less on employ and more on ability. The implication is that more emphasis should be laid on developing critical, reflective abilities, with the understanding of endowing and enriching the student (Harvey 2003).

2.6.1 Skills

Vocational type of education is associated with keeping jobless people off the streets, decreasing youth unemployment, and feeding industry with skilled middle-level professionals (Agrawal 2012; Ziderman 1997). The TVET college has been identified as one institution that enables students to acquire necessary practical skills, knowledge and applied vocational and occupational competence necessary for employment or higher learning or entrepreneurship (Chapter 4, Section 20 of the FET Colleges Act No.16 of 2006).

In response to the needs of the industries, TVET colleges have also been recognised as a sector capable of providing needed skills and capabilities for employment in order to alleviate poverty and to create jobs for unemployed youth who would, in turn, contribute to economic, technological and national development. (African Union (AU) Okoye & Chijioke 2007).

The purposes of the Skills Development Act (RSA 1998) are developing skills of the South African workforce, improving the quality of life of workers and their prospects of work and labour mobility, improving productivity in the workplace, promoting self-employment and improving the delivery of social services. Other purposes of the SDA include increasing investment in education and training and improving return on that investment. It also encourages employers to use workplace as an active learning environment which provides employees with opportunities to acquire new skills. Opportunities for new employees to gain work experience and to employ people who find it difficult to get jobs are also encouraged.

2.6.2 Definition of employability skills and employers' expectations

Skills are not easy to define in relation to employers' expectations because they vary. Current interpretations of employability range from the use of simple measures, such as whether a graduate has secured a job, to in-depth scholarly books on the subject. If employability is measured in the simplistic terms of whether a graduate has managed to secure a job within six months of graduating, it only provides a very vague and imprecise indication of what the student has gained.

A question that needs to be answered is whether the graduate is using the skills, knowledge and understanding gained from their studies in a "graduate-level job". However, this in turn opens up a new debate on what exactly is entailed in a "graduate-level job". There is so much more to employability than gaining employment, and first destination statistics do not consider the fact that some graduates may have taken lower-level jobs in order to deal with financial pressures, particularly after incurring debts through their studies, which is the case for many graduates.

Hillage and Pollard (1998:2) suggest that:

> *"In simple terms, employability is about being capable of getting and keeping fulfilling work. More comprehensively employability is the capability to move self-sufficiently within the labour market to realize potential through sustainable employment".*

They propose that employability consists of four main elements. The first of these, a person's "employability assets", consisting of their knowledge, skills and attitudes. The second, "deployment", which includes career management skills as well as job search skills. Thirdly, "presentation" which is concerned with "job getting skills", for example, CV writing, work experience and interview techniques.

Finally, Hillage and Pollard (1998) also made an important point that for a person to be able to make the most of their "employability assets", a lot depended on their circumstances, such as family responsibilities and other external factors, including current levels of opportunity within the labour market. The Centre for Employability (CfE) at the University of Central Lancashire (UCLan) in the UK has been developing practical solutions to enhance the skills prospects of students and graduates for over ten years. Consequently, careers service origins of this unit, the main theoretical

model that had underpinned this work had been the DOTS model Law and Watts (1977), which consisted of:

- Decision learning – decision-making skills
- Opportunity awareness – knowing what work opportunities exist and what their requirements are
- Transition learning – including job searching and self-presenting skills Self-awareness – in terms of interests, abilities, values, etc. (Watts 2006: 9-10).

Although the value of this model lies in its simplicity, as it allows individuals to organise a great deal of complex career development learning into a manageable framework. It, however, has recently attracted some criticism. McCash (2006) argues that the model is over-reliant on a mechanistic matching of person and environment, and therefore underplays other critical issues such as social and political contexts. He also points out that an implication that raises concerns to individuals as failure to secure a self-fulfilling occupation can be presented or be experienced as a fault of an unsuccessful individual.

Notably, these criticisms overlook the fact that elegant simplicity of the DOTS model is precisely why it has proved so enduring and popular, they also seem to suggest that students introduced to basic concepts of career development through DOTS would be incapable of developing and learning about more sophisticated analyses through this simple introductory structure. Nonetheless, concerns raised in CfE about DOTS in relation to employability are different, becoming evident that the model has shortcomings when it is applied beyond educational careers to a broader concept of employability.

An early effort to capture the CfE definition of employability was reported in Hinchcliffe (2001), reflecting a range of views. Peter Sewell of CLASS Faculty Centre for Employability making the career development case and defining employability as:

> *"having a set of skills, knowledge and personal attributes that makes a person more likely to secure and be successful in their chosen occupation. The most recent articulation of this, which incorporates an important additional new element of "satisfaction", stems from recognition that from an individual's perspective a person may be successful in their chosen occupation but not necessarily satisfied."*

Employability is:

> *"having a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure occupations in which they can be satisfied and successful."*

This definition has been used as a starting point from which to develop a new theoretical and practical framework for employability called, "The Key to Employability" model. It has been argued that in addition to drawing together the essential conceptual issues that underpin an understanding of the concept of employability, this model also provides a clear and visual answer to the simple question of what employability is. It has benefits of not only articulating the concept of employability in a theoretically rigorous manner but doing so in a way that is easily accessible to both practitioners and students.

The Pedagogy for Employability Group (2004:5) provides a list derived from research carried out over the last 25 years and suggests that employers expect to find that the following generic skills have been developed in graduates:

1) Imagination/creativity;

2) Adaptability/flexibility;

3) Willingness to learn;

4) Independent working/autonomy;

5) Working in a team;

6) Ability to manage others;

7) Ability to work under pressure;

8) Good oral communication;

9) Communication in writing for varied purposes/audiences;

10) Numeracy;

11) Attention to detail;

12) Time management;

13) Assumption of responsibility and for making decisions;

14) Planning, coordinating and organizing ability;

15) Ability to use new technologies.

There are other needed enterprise and entrepreneurship skills which are often discussed in employability literature. Harvey (2003) dismisses the notion that once a student is on a vocational course, they will be employable. It is about lessons learnt that showcase the abilities a person has, coupled with creating experiences that develop critical, reflective abilities, with empowering and enhancing a learner at the core of most of their learning (Harvey 2003).

Khandu (2014 as cited in Thindwa 2016) found that industries require more than just technical or specialised skills in TVET college graduates, besides the above listed skills, addition of customer focus and motivation are a necessity. These are some of the qualities that help them see problems as opportunities. Entrepreneurs are people with a vision, driven, persistence, ability to complete tasks and willing to work hard.

According to Goleman (1998), self-confidence in people exudes self-assurance and a presence. Owens (1993) added that people with global self-esteem are said to have self-respect and a feeling of worthiness though realistic in their evaluations of themselves. Thus, it can be suggested that everything a student does during their time at college will impact on their self-esteem, and by achieving development of high global self-esteem they attain employability.

The following individual factors or elements of education for employability are extracted from McQuaid and Lindsay's (2005:209 – 210) table on employability skills and attributes:

- Basic social skills: honesty and integrity
- Personal competencies: proactivity; diligence; self-motivation; judgement
- Basic transferable skills: prose and document literacy; writing numeracy; verbal presentation
- Key transferable skills: reasoning; problem-solving

Employability is a lifelong issue, and nobody is ever perfectly employable. There will always be aspects of a person's employability that will benefit from improvement.

2.6.3 Employability: The global experience

For this study, the researcher chose to explore elements of vocational education and training (VET) from the United Kingdom, Germany, Australia, and Nigeria to gain some international perspectives. VET in these countries bears many similarities to the origin and current developments of TVET in South Africa. What cannot be ignored is that much of the colonial legacies in South Africa are still intact since 1994 and beyond because there is an element of undoing colonial educational legacies. Thus, the importance of exploring some elements of VET in developed countries will enlighten the study to find if there is any similarities or differences by looking, among other things, at some older sources recorded of their VET developments.

Global competition and rapid technological transformation have been the propelling force for a flexible and competent workforce (Nikandrou, Papalexandris, & Bourantas 2000 as cited in Legg-Jack 2014). To meet the challenges of a globally competitive world for a qualitative output, considering the development of employees is necessary to ensure firms meet tasks of international struggle and social change as well as being part of the technological transformation in the work approach (Noe 2002 as cited in Legg-Jack 2014).

There is a global indication that graduates in developing countries do not possess the skills required by the labour force. Kimani (2000 as cited in Legg-Jack 2014) support this by adding that educational institutions in developing countries produce graduates that lack relevant skills needed in the industry. The relevance of educational institutions had been brought into question as the entire world faces challenges due to discrepancies of lack of conformity in education improvements and changes in the workplace.

This was confirmed by the research carried out by Kimani (2000) who observed that there has been a problem with the level of personnel produced in educational institutions; they seem not to meet the demands of the workforce, as result, productivity is hampered. Employability skills trends in Africa and beyond are discussed in the following sections.

2.6.3.1 Australia

Leveson (2000 as cited in Legg-Jack 2014) asserts that employers in Australia and other parts of the world have raised alarms over the increase of higher education graduates without the necessary skills required in the industry. Employer associations in Australia have complained of the scarcity of skills from job applicants in different aspects, some of which include the ability to communicate effectively, working with persons of diverse cultures, problem-solving skills and lifelong learning; also added were other personal attitudes, values and features.

Owing to increased demand to reduce the shortage of skilled personnel, the employers association in Australia have called on the institutions of education and training in Australia to extend the design of the school curriculum beyond academic discipline to incorporate work-related skills in order to make the school system more effective to meet the needs of industry (Sheldon & Thornthwaite 2005 as cited in Legg-Jack 2014).

A study was conducted to measure the opinion of employers of labour on employability skills' needs of technical college graduates, the study revealed that certain levels of skills are in high demand in the private sector, namely basic skills, teamwork personal management, ability to identify and apply right solutions to a problem and thinking skills, among others (Academy for Education Development (AED) 2008).

Employers in Australia have stressed the importance of a highly-skilled workforce as an element of competitive advantage both at local and international levels. This has resulted in great emphasis being placed on soft skills in their recruitment process (Curtis & McKenzie 2001 as cited in Legg-Jack 2014).

2.6.3.2 Germany

In a study conducted by Gibbons-Wood and Lange (2000) on core skills needed by employers in Germany, among others, soft skills such as transferable skills, key competencies, are regarded as those that underpin competent performance in all areas of specialisation.

According to Gibbons-Wood and Lange (2000), the German economy is the third largest in the world. This success was only achieved through highly organised labour market, which is rooted in the German "Dual System", regarded as one of the best national schemes that warrant an effective school-to-work transition. The German dual

system has been so known by industry for producing school leavers with desired skills and aptitude that are required by the industry. Recently, there has been a deviation from the dual system which has led to falling standards due to the inability to adapt to changes in the labour market and new skills requirements. It was noted by Gibbons-Wood and Lange (2000) that the dual system allows training in two locations, a trainee under this system attends learning in the workplace and a part-time vocational college.

The system allows for the learner to develop relevant skills through on-the-job pragmatic “learning by doing” and part-time schooling. Power is shared among the states (Lander) and the federal government. The state oversees education, because it falls within the jurisdiction of the central government to oversee vocational training and certification, as advised by the Federal Institute for Vocational Training Bundesinstitut fur Berufsbildung (BIBB) (Gibbons-Wood & Lange 2000 as cited in Legg-Jack 2014).

In practice, it means that young people are required to attend school from the age of six up to eighteen. After four years of primary school, pupils move into different educational branches, namely secondary general school (Hauptschule), intermediate school (Real Schule) or grammar school (Gymnasium). Often these different pathways merge through the dual system. The dual system (Duales System) is the largest provider of vocational education and training at upper secondary level. On completion of their training in dual system, most participants then take up employment as skilled workers.

The system is described as dual because training is conducted in two places of learning, namely companies and vocational schools. Training in the dual system normally lasts three years. Compulsory full-time education has been completed by the time of commencing vocational training. There are no further requirements for access to training in the dual system.

Training places are offered in private, public enterprises and offices of liberal professions. Training may take place only in training enterprises in which skills required by the training regulation can be imparted by training personnel who are appropriate, both personally and in terms of specialised knowledge. The suitability of training enterprises and in-company training personnel are monitored by the relevant autonomous bodies (Chambers).

Vocational school is an autonomous place of learning in dual system. It is tasked to provide basic and specialised vocational training and to extend previously acquired general education. The primary purpose of training is not only to enable young people to acquire comprehensive vocational competence, designed to make them capable of fulfilling their duties as employees efficiently, effectively and innovatively as well as autonomously and in cooperation with others, but also to acquire vocational competence-based on subject-based, social and methodological competences.

Final training examinations are geared to vocational practice, but also to work requirements and processes of occupation. Teachers are employed in various vocational schools, while trainers are skilled workers in enterprises that provide trainees with knowledge and skills required for an occupation. The German VET system is characterised by a large number of interfaces, namely transitions between training preparation and dual VET, between dual VET and full-time school-based education and training, between initial and continuing VET, between VET and the higher education sector (Schmidt 2010; German Government 2010; German Government 2011b; Lauglo 1993 as cited in Legg-Jack 2014).

In South Africa, a few German dual education pilot projects have been tried by German firms operating in South Africa in collaboration with South African-German Chamber of Commerce and Industry (SAGCI) at the request of DHET, but they have failed (Loynes 2019). It was found that the challenge faced was that companies are production-oriented and not willing to take on apprentices which have remained DHET's critical issue, as is with the sourcing of host employers and having them involved in the projects.

2.6.3.3 United Kingdom

To respond to the call on employability skills development and to also ensure that learners do their best to enhance their employability skills, universities have all sorts of ways to assist (Bowers-Brown & Harvey 2004). There had been a growing rate of commitment to the development of employability skills within the school system in the past half a decade and little attention has been given to employability. However, through skills development components have advanced into a different group of opportunities, as these have been developed into an incorporated, all-inclusive strategy, most newly associated to learning and teaching policy (Harvey & Bowers-Brown 2003).

The modern apprenticeship system was introduced in 1995 and broadened the VET route to new sectors of the economy. The new system is funded by government and is aimed at addressing unemployment. The labour market is uncertain and unstable and very much concerned with firm-specific training linked to specific tasks. There is an increased move towards casual work and outsourcing, which limits the commitment of employers to the development of their workforce. Consequently, it also limits access to structured and systematic learning in the workplace. This hinders further development of the workforce skills and it means future development rests solely with individual capacity, networks and creativity for advancement in the labour market (Adams 2006).

According to Fallows and Steven (2000), three external factors are acknowledged to have an impact on higher education, and these include growing global recognition. In the UK, a huge escalation in the number of students that transit higher education organisations have made it more difficult and competitive for graduates to gain employment, therefore, the range and array of professions into which graduates are progressing are becoming progressively varied.

Only a few school leavers can secure employment that offers direct bearing to what they studied in school. The academic curriculum is an embodiment of components through which other elements are conveyed. These elements that are in the curriculum remain the same irrespective of the subject studied. Rapid transformation in the world of employment due to the emergence of new technologies have forced industries which were in existence to seem not relevant as new industries have taken to modern ways of technology in their services which were not in existence some couple of years back.

Lowden, Hall, Elliot and Lewin (2011) in their research, the UK was selected to form the study sample and the findings highlighted some features, skills and knowledge as well as highbrow competencies that new graduates need to possess to be relevant in the workforce. These include the ability to work and function as a member in a group, identify and solve a problem, self-management skills, discipline-oriented knowledge, literacy and mathematical literacy relevant to the post, information and communication technology literacy, good interpersonal and effective communication skills, creative

and innovative skills, working with directives, and leadership skills (Lowden, Hall, Elliot, & Lewin 2011).

2.6.3.4 Nigeria

Nigeria's National Policy on Education (FRN 2004) recognises technical and vocational education and training as a viable system capable of providing skills necessary for agricultural, commercial and economic development, and as a means of preparing for occupational fields and effective participation in the world of work. The National Policy document (FRN 2004:30-31) states that the goals of technical and vocational education and training are to:

- Provide trained manpower in the applied sciences, technology and business, particularly at craft, advanced craft and technical levels,
- Provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development,
- Give training and impart the necessary skills to individuals who shall be self-reliant economically.

The Nigerian government established notable Boards and Agencies to oversee and support the development of TVET colleges in the country and to recognise the role they play for economic growth and in providing skills for self-sufficiency as well as improving employability prospects.

2.6.3.4.1 Skills development context in Nigeria

Poverty, inequality and unemployment have been identified as serious challenges bedevilling Nigeria as a nation (Appleton, Mckay & Alayande 2008). A study undertaken indicated that a proportion of people living below one US dollar a day has increased to over 65 percent, giving rise to inequality in the country. Aigbokhan (2000) found that with a significant percentage of Nigerians living in absolute poverty there were similarities in South Africa and Nigeria with regards to poverty, inequality and high unemployment.

Ayinde (2008:465-468) found that:

> *"TVET College in Nigeria is recognized as a system with the capacity to provide skills necessary for employment and agricultural, commercial and economic*

development. Increase in agricultural and economic growth decreases unemployment thereby alleviating poverty".

In addition, TVET in Nigeria has been recognised as an instrument for the development of human resources for socio-economic, technological and national development. It is recognised as a system that prepares individuals for effective participation in the world of work, provide skills for employment and poverty alleviation; and for agricultural, commercial and economic development (FRN 2004).

2.6.3.5 South Africa

South Africa, like many other countries globally, seeks to close the unemployment gap by equipping its citizens with skills for employability. In 1994, democracy of the country marked the beginning of a new order in the development of skills required for economic, social and national development as well as employment and poverty alleviation. Some of the problems inherited from the apartheid government that hinders economic, social and national developments are sought as issues to be addressed. Important challenges facing the current national development include inequality, poverty and unemployment (Akoojee 2008b).

The development and provision of TVET colleges in South Africa have been greatly influenced by the social and economic policies of the apartheid regime (Akoojee, Gewer & McGrath 2005; McGrath & Akoojee 2007). Poverty is rooted in unemployment, as Seekings (2007:15 as cited in Bangalu 2015) lamented:

"… low-quality schooling, poor links into urban and industrial labour markets, and the growing capital-intensity of production in most economic sectors resulted in the growth of unemployment among unskilled workers and of mass poverty among them and their dependents."

Skills development is recognised as a viable tool for meeting both social and economic aspirations in South Africa (Akoojee, Gewer & McGrath 2005; RSA 1998). Aspirations to develop and provide skills necessary for economic and social developments have led to legislative approvals of skills development laws and initiatives, which include the Skills Development Act No. 97 of 1998 (RSA, 1998), National Skills Fund (NSF) and Accelerated and Shared Growth Initiative in South Africa, among others (AsgiSA) (RSA) 1998; McGrath & Akoojee 2007).

AsgiSA envisaged achieving the goals of halving poverty and unemployment rates and facilitating equity in employment would require improved economic empowerment and growth rate. Poverty, inequality and unemployment have a negative impact on economic and national development as there is a strong relationship among them in South Africa (McGrath & Akoojee 2007). Inequality in employment, education and training, perpetuated by the apartheid policy, is one of the challenges threatening social, economic and national development in the country.

McGrath and Akoojee (2007) note that the country's level of inequality, however, is among the worst in the world. Inequality in education and training contribute to the shortage of skilled workforce, which affect the economic development of the country. Qualified and skilled workforce are in short supply as people were previously not given the opportunity to acquire skills necessary for employment and economic development.

McGrath and Akoojee (2007) assert that part of the explanation for the high unemployment in South Africa is that economic growth has not been high enough over the last 30 years. Equal access to quality education and training at all levels is provided as necessary skills, competence and knowledge are required to strengthen and improve the South African economy.

2.7 RESEARCH GAP

An overview of studies conducted both at local and international levels showed that in one way or the other, college graduates are deficient in some skills needed for their employability. In other words, schools and TVET colleges seem not to be preparing these graduates properly for employment as there is a gap in skills acquired and skills required. More so, there are very few studies conducted on employability of technical college graduates in South Africa.

It was also observed in the literature reviewed that none of the studies conducted at both local and international levels considered having a policy document on the type of skills recommended for lecturers, graduates and employers. There appears to be a major gap in policies as adopted in most of the studies and that is a major gap which this study has found.

2.8 CONCLUSION

Presented in this chapter were geographical and demographic descriptions of South Africa and the province of Mpumalanga. Also discussed were the reviews of related literature on debates and contentions on technical and vocational education in the country, and the concepts and definitions of employability skills practised both locally and globally.

The next chapter presents the methodology adopted for the study.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In the previous chapter, a literature review for this study was carried out on TVET college graduates' employability and the researcher was guided by a conceptual framework during the literature search. This chapter presents, in detail, the research approach, design and methodology for this study. This research employed a qualitative method using a case study design to understand the phenomena and it also explored qualitative approaches to understand the participants' points of view on the quality of qualification, set skills required and employability. The study interpreted reality from participants' points of view when analysing data that were collected (Bless, Higgs-Smith & Sithole 2015:18). It also presented a detailed overview of the selection of sites, as well as a detailed explanation of steps taken to ensure reliability and validity of the study. Caution was given to ethical issues such as trustworthiness, confidentiality and bias.

3.2 PHILOSOPHICAL FOUNDATION OF THE STUDY

The study aimed to understand the interface associated with TVET college qualifications and offers recommendations for graduates' employability when they exit the college. In order to understand the problem, an empirical research method was applied as well as a systematic and logical explanation of the epistemic imperative.

3.2.1 Epistemology

The epistemology of the study sought to understand if the quality of a TVET college qualification could reduce the rate of unemployment of graduates once they exit a TVET college at the end of a three-year study. Schwandt (2000) argues that interpretivists' human sciences aim to understand human action. This study aims to understand human action using interpretivist paradigm. To understand human action, it requires the researcher to grasp the meaning of human actions of participants and interpret the meaning of the actions observed. In order to understand what a particular action means, one has to interpret what the actions mean (Schwandt, 2000). A qualitative researcher's quest is always to expect the philosophies of interpretivism, philosophical hermeneutics and social constructionism to provide different ways of understanding concerns about what human beings are doing or saying. The study focuses on exploratory research to gain a broad understanding of the phenomenon

and a case study design that is reviewed in detail, guided the findings (Bless & Higson-Smith 2000).

According to Denzin and Lincoln (2000), the research design described a flexible set of guidelines that connected theoretical paradigms to strategies of enquiry, and to methods of collecting empirical material. The design also connected the researcher to specific sites, persons, groups, institutions and bodies of relevant interpretive material, including documents and archives. Strategies of inquiry connected the researcher to specific methods of collecting and analysing empirical material. Denzin and Lincoln (2000) also stated that these strategies included a case study, phenomenological and ethnomethodological techniques and they also used grounded theories, biography, auto-ethnographic, history, action and clinical methods. This study used case study, phenomenological and grounded theory methods to understand the epistemic imperative.

The next section focuses on strategies of enquiry used in the study to select the methods that attempt to answer the question of enquiry.

3.2.2 Research paradigm

Interpretivists are of the opinion that the social world cannot be studied using same methods and techniques in human sciences. The argument is that human beings are not to be studied in a laboratory but their environment since they are influenced by things that are happening around them. It is also a cluster of beliefs that stipulates what are to be studied, how research is to be done and how results are to be interpreted (Bryman 2012 as cited in du Plooy-Cilliers 2015).

The purpose of this study is to gain insight on youths' lack of employment and the problem they face, which is a TVET college qualification that does not award employment. It was important to explore if there is an interface between skills acquired by TVET college graduates and skills required by industries in Mpumalanga. Interpretivists challenge the idea of objective knowledge and truth since they see facts as fluid, however, what is factual depend on the context and people's interpretation of information (du Plooy-Cilliers 2015). In view of this, the paradigm enables the researcher to explore students', lecturers' and TVET providers' interpretation of the problem as well as what employability skills are required from TVET college graduates.

The interpretivist paradigm allows the subjects being studied the opportunity to interpret their situation and also allows the researcher to explore if there is an interface between skills acquired by TVET college graduates and those required by the industries to afford them chances of employment. It allows the researcher to gain insight into the TVET providers' view on the skills offered for the graduates to provide employment.

3.3 RESEARCH APPROACH

Qualitative research is a field of enquiry and has methods connected to social interpretive studies. There are many detailed and separate literature on methods and approaches such as case study, politics and ethics, participatory enquiry, interviewing, participant observation, visual methods and interpretive analysis. This study focused on a case study, participatory enquiry, interviewing and interpretive analysis.

3.3.1 Defining the qualitative research method for the study

The qualitative research method is deemed suitable for this research. It deals with underlying qualities of subjective experiences and meanings associated with the phenomena (Strydom & Bezuidenhout 2015). The methodology allows exploration of subjects' experiences and meanings. Neuman (2011 as cited in du Plooy-Cilliers 2015) states, a qualitative researcher attempts to capture and describe inner lives of the people, methods allow understanding of the why, what and how of the phenomena. This method does not convert or interpret observations of participants or the researcher into numerical form but rather how they experience, perceive and attach meaning to their phenomena (Keyton, 2011 as cited in Strydom & Bezuidenhout 2015).

The research was also explanatory and descriptive because of various methods that were used to collect data. These are focus groups, unstructured in-depth interviews and documents reviewed. As du Plooy-Cilliers (2015) stated that interpretivists embody that social realities are a constant state of flux and dependent on the way individuals experience reality internally. This research embodied realities of how graduates experience reality internally by exploring their social reality. This is because interpretivists believe that truth is dependent on people's interpretations of facts and not interested in generalising their results (du Plooy-Cilliers 2015).

Qualitative methods give an in-depth understanding to an interpretivist allowing multiple realities to be explored. However, a different methodology is necessary to allow an interpretive understanding and explanation to a social researcher in order for them to appreciate the subjective meaning of social action. Schwandt (2007), adds that reality should be interpreted through the meaning that research participants give to their existing world and can only be discovered through language. Its strategy emphasis is on words collection as well as analysis of data (Schwandt 2007 as cited in de Vos, Strydom, Fouche & Delport 2012).

3.3.2 Addressing the challenges and benefits of using qualitative research method

One of the interpretivists' challenges is the assumption that common sense guides people in their day-to-day lives and require one to understand or grasp their view of common sense (du Plooy-Cilliers 2015). However, researchers do not generalise results because they are dependent on people's interpretation of facts. Fouche and Schurink (2012) cautioned researchers who are working on an epistemological model to generate theory from empirical data in order to indicate from initial design that some further decisions may be taken when executing the studies, as well as some designs may be added as the research strategies and practices evolve.

This method uses words like data and it also uses unstructured focus group interviews. It allows flexibility and transcribes verbatim, making it difficult to generalise or be biased. There are some challenges when recording interview responses. Noise in some of the recordings is audible because a quiet place for interviewing cannot be secured as a suitable site for the interviews to be conducted. Misinterpretation of the responses given by the participants responding to the questions asked is not a factor for this study. There is no need for bias in the case of an interpreter translating the meaning of words incorrectly, in case of using a different language. There is no need to use a different language (Bless, Higson-Smith & Sithole 2015).

Bless, *et al*. (2015) stressed that there can also be bias from the researcher and participants. There are no other constraints that hindered the attainment of the truth. Such are sociological, ontological and methodological dimensions (Mouton 2002:29):

- Sociologically, there is no constraint of the researcher lacking knowledge of the subject of inquiry, neither was there biased interpretation of data or poor judgement about various decisions in the research process.

- Ontologically, the constraint of the complexity of human behaviour which might have been impossible to predict future behaviour was not visible. The study did not involve some aspects of human behaviour which are extremely difficult to observe or measure systematically, these are morals/emotions/spiritual.
- Methodologically, the constraint of choice of method or technique used was not inappropriate and it did not ignore limitations that are particularly unusual to the approach.

Instead, these methods created openness, encouraging people to expand on their responses hence they allowed opening new topics areas not initially considered.

3.4 RESEARCH DESIGN

3.4.1 Design

A research design is defined as a set of guidelines and instructions to be followed in addressing the research problem. Its main function is to enable the researcher to anticipate what appropriate research decisions are to maximize the validity of the eventual results (Mouton, 2002:107). Mouton (2002:108) states that the structure and logic of a research design are determined by the formulation of the research problem so that the structure of the design can have a direct function of the research goals that have been set.

3.4.2 Case study

Case study is a thick and detailed description of a social phenomenon that exists within a real-world context. It recounts a real-life situation by thoroughly describing the scenario in which the phenomena occur. (Bless, Higson-Smith & Sithole 2015). This study describes real-life accounts of TVET college graduates and thoroughly describes their scenario in the context of their real-life experiences in relation to employment.

The case study allows a deep exploration in order to provide a full and thorough understanding of the situation by interviewing participants about their lived experiences, therefore, giving a voice to the people (Gomm, Hammersley & Foster 2000; Babbie & Mouton 2001 as cited in Bless, Higson-Smith & Sithole 2015). As Willig (2008) argues, case studies are not characterised by methods used to collect and analyse data but focuses on a unit or event of case analysis. The case can be of an individual, event, institution or situation (Stakes 2005).

For this research, a case study design was most appropriate because it is a single case that was focusing on one phenomenon of campus within the Gert Sibande district in Mpumalanga. Therefore, this case study is considered an intrinsic case study. The question of the research is easily answered using the methodology the researcher has chosen, namely focused groups' discussions, structured and unstructured interviews and document reviews. This research was a pragmatic case study and it allowed additional validity of the case study and questions got refined iteratively through engagement with the case (SAGE 2008).

The case study design, as well as the methodology, implied allow sensitivity to be used in the context of this case and there is no generalisation of the context which is being studied (du Plooy-Cilliers 2015). Nonetheless, the focus of this study is to explore if there is an interface between skills acquired by TVET college graduates and the skills required by industries with respect to their employability in the region of Mpumalanga.

3.4.2.1 Challenges of using case study

There are questions about what makes a good case to study. The answers are subtle and have been contested by many scholars (SAGE 2008). However, the researcher thought this case study raises awareness and will allow TVET providers to speed up any processes to address this phenomenon.

- This study's greatest challenge was not reaching participants of the case study; however, they were all able to get to the researcher or vice versa.
- The budget was not limited in the case of having interpreters or cultural barriers, as well as being able to travel to all our campuses since they are spread out in the region of Mpumalanga. This research required the researcher to travel quite a bit to be able to reach some of the participants in order to collect a variety of data to allow her to have excellent analysis and make conclusions that presented validity (Enslin 2015 as cited in Bezuidenhout & Cronje 2015).
- Enslin (2015) further says that accessibility may be another limitation that this research might have had to investigate, the participants might have not being accessible at the time the researcher arranged to meet for data collection, which led to the rescheduling of appointments. This might have hindered progression in terms of the period and delays in completing the research in the allocated time.

- The other limitations were shifts in conditions during the study, such as the conditions of the event improving or there being a shift in students getting employment, yet this was the case being investigated. More partnerships might be formed during the study, this might shift the conditions of the study.
- If there are participants that may not want to be recorded or are shy in expressing their thoughts. This is another challenge that may be a possibility.

Despite limitations encountered in this research, these limitations guided the researcher in reporting the findings and helped support the reliability and validity of research findings (Enslin 2015).

3.4.2.2 Addressing challenges incurred in using a case study

- The researcher used a structured qualitative design which was purposefully set so that results were not generalised to make assumptions about reasons why TVET college graduates are not able to attract functional employment after they graduate from a TVET college (Enslin 2015).
- The researcher decided with participants prior to scheduling an interview and made certain that there was a venue available to do the interviews.
- The researcher saw that there was no or very low noise levels when recording interviews and sought the consent of participants in writing before the scheduled interview.
- The researcher's choice of qualitative method was set to use various criteria to determine trustworthiness or credibility of research findings. This was divided into credibility, transferability, dependability and conformability (Lincoln & Guba (1985) in Koonin 2015).

3.5 RESEARCH METHODOLOGY

The qualitative research methodology was infused within individuals' conception and ideologies. When the focus of one's research is based on experiences, feelings, identity, sufferings, or life story, it is assumed to be the primacy of an individual's mind (Gergen & Gergen 2000). They further argue that attempts to give voice to another are to favour a metaphysics of either self or other's difference. Qualitative research field is defined by a series of tension, contradictions and hesitations and it is within these uncertainties that vitality of qualitative inquiry is drawn (Denzin & Lincoln 2000).

3.5.1 Empirical research (Qualitative)

There were two broad categories of research questions as Babbie and Mouton (2001) and Mouton (2001 as cited in Bezuidenhout and Davis 2015) identified, namely empirical and non-empirical. In this qualitative research approach, empirical research is applicable since it observes what can be measured and the type of questions asked are exploratory. It helps answer what can be done by TVET providers to enhance students' employability. In addition, descriptive questions are used to determine any interface that may or may not exist (Babbie & Mouton (2001); Mouton 2001 as cited in Bezuidenhout and Davis 2015).

3.5.1.1 Site

The site for this research is a public TVET college at Secunda in Mpumalanga province. The college is supplemented by a petrochemical company as well as a Skills Academy campus in Standerton. The sites were chosen because they helped in finding answers to this phenomenon and they were easily accessible to the researcher.

3.5.1.2 Participant selection

The sample was a group of individuals from whom data were collected from selected participants (McMillian & Schumacher 2010). The anonymity of all participants from institutions was protected. The criterion that was used by researcher to select graduates as participants for this study had emphasis on graduates' frustrations regarding not being able to attract functional employment. Six graduates of previous years who have completed TVET engineering course, six current engineering students, were selected based on their position as final year students and their willingness to share their views on the qualifications they were enrolled for. Equally important, five lecturers that are lecturing programmes at the TVET College were selected as subject experts.

The choice of the participant of Skills Academy campus manager in Standerton Mpumalanga was motivated by the intention to explore empirical situation that makes the campus unique, if not different, from other campuses of Gert Sibande TVET College. At this Skills Academy Campus, SETA is involved, and partnerships have been formed, as well as investment in a practical centre that allows students to experience the practical component of the course they chose. Additionally, three

participants who are employees of companies participated in the one-on-one interview sessions and they gave insight on whether the curriculum of Gert Sibande TVET College was in line with their work-related needs and provided reasons for students not being capacitated in functional employment at their companies.

3.5.1.3 Data-collection strategy

The research sample was drawn from an exploratory case study consisting of five engineering graduates who have completed their studies at the TVET college in previous years, as well as those that are currently studying engineering, lecturers that are teaching at the college, employers and stakeholders. The researcher attempted to understand the nature of the case study (Gomm, Hamersley & Foster 2000) thereupon, exploring their journey of study as experienced at a TVET college.

For data collection, unstructured focus groups discussions, structured and semi-structured interviews were conducted. The graduates participated in two separate sessions that lasted for an hour each. This allowed collecting rich data from the two groups. As for lecturers and stakeholders, a one-on-one interview session of half an hour each was enough and there was no need for another organised session. The data collected were enough to draw conclusions and participants were available. Data collected were used to determine participants' experiences regarding skills required to acquire employment (Strydom & Bezuidenhout 2015). They stressed that it consisted of a small group of people (six to 12 people). For this research, a maximum of six people at a time in each focused group was interviewed (Strydom & Bezuidenhout 2015).

During this form of data collection, conversations were recorded with participants' consent. The focus groups allowed the researcher to ask the participants detailed questions related to the specific aspects that the researcher was investigating. It also provided insight into the participants' views on the topic. This allowed the researcher not to be biased or generalise the content of data collected. Questions asked to the participants were a mix of open-ended and closed questions related to the phenomenon. Questions were given at different time or sessions before the interview day to allow time to read questions and prepare for possible answers. As for stakeholders and lecturers, they received these questions together with a request to participate in the research beforehand, so that they could give approval or give their consent to participate.

3.5.1.4 Data analysis

Qualitative data analysis is viewed as easier than quantitative, however, through analysis and interpretation, data are transformed into findings (Bezuidenhout & Cronje 2015). As described by De vos, Strydom, Fouche and Delport (2011 in Bezuidenhout & Cronje 2015), qualitative data analysis is the process of bringing order, structure and meaning to mass of data. This research focused on conversation analysis and content analysis.

For content analysis, this research explored, identified, averted and converted themes and patterns embedded in the TVET college qualifications received at the end of a three-year programme when they exit the TVET college. According to Zhange and Wildemuth (2009 in Bezuidenhout & Cronje 2015), qualitative content pays attention to unique themes that illustrate the range of meaning of the phenomenon rather than statistical significance, and this study paid close attention to those unique themes.

3.5.1.5 Researcher's role

According to Strydom and Bezuidenhout (2015:182), the following are important steps to keep in mind when doing field research:

- The researcher develops a rapport with the participants that are being studied, thus, a close, harmonious and sympathetic relationship with the participants. This enables the researcher to gain more valuable and appropriate data.
- One needs to immerse themselves into the society that one is studying to experience the day-to-day dealings of the community.
- Making detailed notes as well as detailed recordings of the thoughts and feelings of the community that are being studied is paramount.
- The researcher avoids falsifying information or distorting results. The researcher needs to avoid inappropriate research methods which may allow bias to influence the interpretation of results.
- Lastly, consolidating data that have common trends that surface during the research process. The researcher guards against being subjective and focus are on the participants' responses and not on personal feelings and opinions.

3.6 TRUSTWORTHINESS OF THE STUDY

Since qualitative researchers do not use numbers as evidence, they use different criteria to determine the trustworthiness or the credibility of the research findings.

Qualitative research aims to promote the understanding of a phenomenon. This research promotes the understanding of the phenomenon and seeks to uphold credibility, transferability, dependability and confirmability (Lincoln & Guba 1985 as cited in Koonin 2015).

This research used the following four criteria of trustworthiness to establish validity and reliability (Koonin 2015:260).

3.7 ETHICAL CONSIDERATIONS

3.7.1 Ethical research phase 1

There was a notification to the participants that they were taking part in the research. Formal notification such as written letters and consent were sent back to the researcher. It was also important for them to understand the expectations during participation, whether and how identities were protected and whether the results were published or not.

The participants were also informed that there were no incentives to be provided however if the need arose to provide refreshments, this was considered by the researcher since some of the data may be collected after hours for working participants. Questions were prepared for focus groups and interview facilities where interviews were conducted with stakeholders, graduates and lecturers were outsourced.

There was a signed consent between the researcher and participants to keep records for the research only and nothing else.

3.7.2 Ethical research phase 2

The researcher made certain that there was all that was required to conduct the research and everyone and everything that was required for the research, such as informed consent forms, recorder for collection of data, dealing with sensitive information, avoiding the provision of incentives, avoiding harm, dealing with confidentiality versus anonymity and avoiding deception, was adhered to (Louw 2015).

3.7.3 Ethical research phase 3

Data were collected from the participants by making sure that their physical and psychological comfort was of high priority. They were informed that their sensitive

personal information was protected. There were no embarrassing situations and their time was not wasted. Incentives were also not given for participating in the research and refreshments were not provided at the time of data collection. Assurance that confidentiality was going to be kept was important for the participants to know.

3.7.4 Ethical research phase 4

Analysing of qualitative data and interpretation requires data to be transformed into findings. There are some unique and distinct concepts regarding qualitative research, according to Bezuidenhout & Cronje (2015:229). They are:

- Textual
- Iterative
- Hermeneutic
- Subjective
- Constructed and symbolic.

This research focused on iterative, hermeneutic and subjective when analysing data.

3.7.5 Ethical research phase 5

The first step was to transcribe data collected to get a general feeling of information gathered. Notes were also made, and impressions were written down enabling the researcher to improve the understanding of the material collected (Bezuidenhout & Cronje 2015). The next step was a coding unit which was also known as concept by researcher. It was the one to indicate whether phrases, individual words, symbols or paragraphs were used for coding units. This research used phrases as they were easy for the researcher to remember when interpreting data.

There were considerations to be noted when interpreting, as Zhange and Wildemuth (2009:313 as cited in Bezuidenhout & Cronje 2015:242) stressed and which were:

- Be able to explain the relationship found by the researcher.
- Extraneous information should be taken into consideration.
- All relevant factors affecting the problem must be considered to avoid false interpretation.

The process applied in coding, analysis and interpretation was reported as truthfully as possible. The qualitative content analysis for this research was not captured

digitally, but it was translated into phrases and words to catch intonations and inferences that might lead to further thematic linkages (Bezuidenhout & Cronje 2015).

3.7.6 Piloting phase

The pilot study was done prior to the actual data being collected. The purpose was to find out if the questions prepared would yield desired results and to find out if the case study would collect rich data. The questions asked yielded successful responses although some of the questions were not allowing correct responses that the researcher wanted or hoped for as the pilot study comprised Business Studies students. However, there were some rich data collected as they seemed to face similar issues as the engineering students. This led to the researcher choosing to include their data to the study. Both focus groups and in-depth interviews collected rich data that allowed and enabled the analysis to be easy and worthwhile.

3.8 BENCHMARK FOR EVALUATION CRITERIA OF DATA COLLECTION

This was based on how thorough the research had been done, and the credibility was on how extensively the researcher had consulted sources and used existing information to support her points of view and findings.

Another factor was how well the researcher had interpreted the data and maintained the credibility of the findings.

3.9 CONCLUSION

Discussed in this chapter were the research approach design, methodology, challenges plus limitations. There was also a discussion on the methods that were used to collect data and their analysis. Lastly, a discussion on the trustworthiness and ethical considerations including the benchmark for the evaluation criteria of the dissertation was included.

The next section deals with data analysis.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

4.1 INTRODUCTION

In the previous chapter, there was a focused discussion of the research methodology. This chapter presents the findings of a case study based on data collected from the participants' interviews and documents reviewed by the researcher at a selected TVET college in the Gert Sibande District Municipality in Mpumalanga. Responses given by the chosen participants from the college made up data collected from semi-structured interviews, which seek to find out what TVET providers in Mpumalanga do to enhance students' employability. The responses from focus groups and in-depth interviews were analysed and triangulated with the analysis of documents from the college. The data were presented and discussed in terms of the aims of the study and research questions. The relevant available literature revealed a gap in the relevance of the skills offered at the college and the ability to acquire employment in industries in the Mpumalanga region.

As indicated in chapter one, this study aims to determine the sets of skills required for TVET college students' employability as perceived by lectures, stakeholders, students and employers. The general research question that guided this study is:

- What can TVET providers in Mpumalanga do to ensure that their qualifications are relevant to enhance students' employability?

The sub-questions are:

- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as perceived by lecturers?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as perceived by graduates?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as required by employers?
- Is there an interface as defined by TVET college stakeholders? If so, what is its nature?
- What can TVET providers and employers in Mpumalanga do to enhance students' employability?

4.2 BIOGRAPHICAL INFORMATION

Table 4.1 contains the biographical information of participant lecturers which includes study name, gender, subjects and NQF level responsible for, and experience. Similar information was given for stakeholders' participants in Table 4.2 which includes study name, responsibility and experience; students' participants, Table 4.3 includes participant, study name, programme they studied and entry-level to TVET and lastly, Table 4.4 lists employers' participants, study name, position and experience.

Table 4.1: Biographical Information of Lecturers involved in the study

Participant	Study Name	Gender	Subjects & Level responsible for	Experience of teaching the subject/s
LECTURER 1	LEC 1	Male	Electrical (Level 4)	+/- 20 years of teaching and working at the industries
LECTURER 2	LEC 2	Male	Fitting & Turning (Levels 3 and 4)	34 years of teaching and working at the industries
LECTURER 3	LEC 3	Male	Mechatronics (Levels 2; 3 and 4)	12 years of teaching and working at the industries
LECTURER 4	LEC 4	Male	Electronics (Levels 2 and 3)	6 years at the TVET. 10 years as an IT specialist.
LECTURER 5	LEC 5	Female	Professional Engineering Practice (Levels 2; 3 and 4)	-/+ 10 years at college and working at the industry.

Table 4.2: Biographical Information of Stakeholders involved in the study

Participant	Study Name	Responsibility	Experience
College Deputy CEO Academic Affairs	CA	College Deputy CEO Academic Affairs	7 years as Campus Manager at the college. 2 years as Deputy CEO Academic Affairs.

Campus Manager	CM	Skills Academy Campus Manager	+/- 10 years Campus Manager
Student Liaison Officer	SLO	Student Liaison Officer	7 years

Table 4.3: Biographical Information of Students involved in the study

Participant	Study Name	Programme	Entry-level to TVET
Previous student – Focus group	PSFG 1	Engineering & related design; Mechatronics; Electrical Infrastructure Construction	Matriculation certificate
Current student – Focus group	CSFG 1	Transport & Logistics; Finance	Matriculation certificate

Table 4.4: Biographical Information of Employers involved in the study

Participant	Study Name	Responsibility	Experience
EMPLOYER 1	EMP 1	Accountant	**5 years**
EMPLOYER 2	EMP 2	Accountant	**5 years**
EMPLOYER 3	EMP 3	Human Resources	**+/- 5years**

4.3 RESEARCH QUESTIONS, THEMES AND SUB-THEMES

Research questions, themes and sub-themes are reflected in Table 4.5, and thereafter a detailed explanation of themes and sub-themes is given.

Table 4.5: Research Questions, Themes and Sub-themes

Research questions	Themes	Sub-Theme
1. What are the sets of skills graduates from TVET Colleges in Mpumalanga need for employability as perceived by lecturers?	4.3.1 Theme **1**: Sets of skills graduates need for employment as perceived by lecturers	

	4.3.2 Theme **2**: Sets of skills graduates need lack employability component.	4.3.2.1 Practical work 4.3.2.2 Properly equipped workshops 4.3.2.3 Core subject of the programme 4.3.2.4 High quality students enrolled 4.3.2.5 Proper career guidance 4.3.2.6 Industry relationships formed 4.3.2.7 Lecturer consultation 4.3.2.8 Trade/Artisan lecturers 4.3.2.9 Reduce number of students per lecturer
2. What are the sets of skills graduates from TVET colleges in Mpumalanga need for employability as perceived by graduates?	4.3.3 Theme **3**: Perception of graduates with regards to set skills.	4.3.3.1 NC (V) qualification 4.3.3.2 Subjects we need for recognition 4.3.3.3 Marketing NC(V) programmes 4.3.3.4 Lack of knowledge in relation to career path 4.3.3.5 Forgotten after graduation
3. What are the sets of skills graduates from TVET colleges in Mpumalanga need for employability as required by employers?	4.3.4 Theme **4**: Set skills required by employers for employment	4.3.4.1 Minimum requirements for a job opportunity 4.3.4.2 Information sharing on what programmes are offered at TVET college

		4.3.4.3 Working relationships between industries and TVET college
4 Is there an interface as defined by TVET college stakeholders? If so, what is its nature?	4.3.5 Theme **5**: Interface as defined by the TVET college stakeholders. 4.3.6 Theme **6**: Nature of the interface.	
5 What can TVET providers and employers in Mpumalanga do to enhance students' employability?	4.3.7 Theme **7**: Enhancement of students' employability.	

A discussion of seven identified themes and sub-themes are presented in detail and each is supported by direct quotes taken from interview responses of participants in the study. Each participant has a study name as shown in tables 4.2; 4.3 and 4.4 above.

Research question 1: What are the sets of skills graduates from TVET colleges in Mpumalanga need for employability as perceived by lecturers?

4.3.1 Theme 1: Sets of skills graduates need for employment as perceived by lecturers

Data collected during in-depth interviews reveal that there are certain skills necessary for graduates to be employable. These skills are deemed essential by lecturer participants of the study. They pointed out Physical Science or Science, Mathematics, technical skills and problem-solving skills help students to figure out things. Other important skills that would assure employability of students are enough practical work and workshop exposure if they continue to work with dated equipment in workshops. They shared their views:

> *They need certain technical skills, physical Science or Science, Mathematics and problem-solving skills which helps them figure out things; then they are trainable. [LEC 3]*

Topics are being taught without any workshop exposure to show how it works practically. With workshops having outdated equipment, safety and proper practical subject matter are not done properly. [LEC 1]

The practical component is done but not enough to say that I have enough hours of practical work nor worked with the correct equipment. There's never enough time to do practical work with the students since the same lecturers are expected to do both practical and theory. [LEC 4]

The discussions validated the importance of these skills if students are going to have an opportunity of being employable. An artisan requires technical skills as well as workshop exposure of industry to demonstrate how they work. Further discussions led to question whether NC(V) Engineering programmes' subject matter is of quality. To understand if they play a part in contributing to low-quality skills lecturers had this to say. Responses suggested:

NC(V) subject matter is good, but it is structured wrongly Three hours of practical work a week and large numbers do not work. One year of the three years of NC(V) would give the students 900 hours which gets them ready for an apprenticeship. No-one has educated the industries about NC(V). [LEC 2]

The weighting is 50% theory and 50% practical, ideally, it should be 75% practical and 25% theory. [LEC 1]

The NC(V) programmes also train them to be employable or entrepreneurs, the knowledge they have acquired is not enough to prepare them. A subject I teach, Principles Engineering Practice, prepares them for entrepreneurship. They do not leave the college well equipped to be able to start their businesses. [LEC 5]

Responses confirmed that programmes are of quality although wrongly structured. As suggested by lecturers, the practical component is 50% as opposed to 75% of their study time. This validates lack of enough practical work in workshops. Besides, as entrepreneurs, one lecturer mentioned graduates do not graduate equipped with enough knowledge to allow them to start up their businesses.

Consequently, one lecturer posed a query about the connection between curriculum developers and industries, the lecturer is concerned about the content of most NC(V) programmes as skills required by the industries do not seem to match those that TVET

college offer and neither do they seem to be linked to what industries require. He explained:

> *The curriculum developers don't seem to link up with the industries to find out what is required by them so that when they leave the College, they are well integrated. TVET Colleges need to work with the industries, our subjects need to service the industries around here. [LEC 1]*

The lecturer advocates that subject matter has to serve industries of this region, however, he observed that it does not seem to match what industries are looking for in employees. The consensus perceived by lecturers is that the curriculum written for TVET colleges needs to speak to the needs of industries in the area. This will enhance the relevance and chances of employability.

4.3.2 Theme 2: Sets of skills graduates acquire lack employability skills

Progression of interviews with lecturers informed a lack of employability skills which suggests without enough practical work, well-equipped workshops, core subjects of programmes incorporated, high-quality students enrolled, proper career guidance offered, relationships between industries and college formed, lecturer consultation, trades/artisan lecturers employed, and reduced number of students per lecturer, students have fewer opportunities of acquiring employment in industries of this region.

4.3.2.1 Sub-Theme 1 - Practical work

Lecturers' perception from data collected through confirmed, practical work is the most essential component of a skilled artisan. If this is missing, students may be deemed unemployable because an artisan is required to build, manufacture and maintain using their hands as opposed to understanding acquired information, to afford them employment. Although the theory component is important, without enough practical hours accumulated while studying, the qualification may be deemed irrelevant. Two lecturers asserted:

> *The world needs skills. The economy needs people who can build, manufacture and maintain. Therefore, we train artisans. [LEC 2]*

> *They must have a practical component. 75% of their time in the three years, should compose of practical work so that they are employable. This would give*

them at least 600 – 900 hours of work then when they exit the college, they would be employable. [LEC 2]

Students who manage to find meaningful employment do not know how to work with the equipment they find at the industries since they have not been exposed to such machinery. [LEC 1]

We need to create an environment that makes students want to work, have proper tools, safety issues covered, have control of tools, teach them to work ethics that they would take with for the rest of their lives so that they can be employable. Right now, our students are not employable because they do not have proper workplace experience. [LEC 2]

Interviews with the Campus Manager reveal that the Skills Academy campus, one of the campuses of Gert Sibande TVET College seems to have it right. Students spend more time doing practical work and learn how things are done in the industry. Their relationship with the industries is good, proving how essential practical work is to industries of this region. She said:

Most of the students spend most of their time in the workshop doing practical training. We offer on the job training and we seek employment for them. The students spend six months on theory and lots of practical work then they go to get skilled in an industry. We are affiliated with Sasol as well as other mines. [CM]

As discussions continued, a concern was raised by the SLO regarding students' WBE/employment placements. He indicated opportunities are being missed by students due to lack of safety skills which are an essential skill required by most industries in the area. Industries do not want to be responsible for any unskilled students because they will be exposed to very dangerous equipment. If they are to skill students on safety, much time is required. It can be as short as two weeks or one month. This skill goes hand in hand with practical work. He said:

When seeking employment for students or placing them for work-based experience (WBE), industries require the students to know about safety and often they want to train them for a period of 2 weeks to a month on their safety

code. This does not often work in student's favour because they lose on opportunities. [SLO]

The findings confirmed that practical work accompanied by safety skills are important skills for graduates' employability as well as industries in this region. These skills should have been part of subject matter taught at TVET colleges for students pursuing an engineering career.

4.3.2.2 Sub-Theme 2 - Well equipped workshops

Further discussions reveal that there are workshops at the college which are not properly equipped or have outdated equipment. This seems to be a contributing factor to students' employability opportunities. One lecturer was confident that they can team up and prepare workshops to required standards affording students a proper chance for employability. They said:

Properly equipped workshops must be prepared to supplement workshop time or on-the-job training for students. [LEC 2]

Lecturers should be able to prepare workshops to specific requirements so that when students leave the TVET college they would be employable. What is required is funding to build the workshops. [LEC 3]

Students need to practice what they are learning in theory and need properly equipped workshops to facilitate assimilation. [LEC 1]

One lecturer highlighted the importance of having managers that have worked at an industry or understand the trade well because they would be able to support such projects and desire to have well-equipped workshops. He commented:

Campus Managers should also have a trade qualification so that when lecturers say we need this kind of equipment they would not wonder or question why. It would also be easier for them to request for proper workshop equipment or want to equip workshops with the best machinery so that students would be employable and create trust with industries because they would know what kind of students, they are getting from the TVET college. [LEC 2]

Lecturer [LEC 2] revealed a valid point as to why industries will not want any relationship with TVET colleges. Industries do not trust the calibre of students coming

from colleges and they do not know the relevance of the TVET qualifications. He argued that, with properly equipped workshops, these students will be recognised by industries and will easily get employment and trust will be established between industries and TVET college.

4.3.2.3 Sub-Theme 3 - Core subjects of the programme

Lecturers confirmed most of the programmes' core subjects are either irrelevant or left out or are offered as optional subjects. They also mentioned that students have too many unnecessary subjects that do not add any value to their qualification and some subjects are vague and vast. They stressed:

> *Some of the topics are vague and vast with various interpretation. Others are optional yet they are the major subject that makes up the programme. One programme like this is Mechatronics where electrotechnology is optional. [LEC 3]*

> *Fitting and Turning has many unnecessary subjects that do not serve the course, and some are optional. How can a core subject be optional, and it is the makeup of the course itself? They should have four core subjects and a communication subject which should include computer component. [LEC 2]*

> *Vocational subjects of Electrical programmes are not terrible however, a subject like Electronic Control and Digital Electronics [ECD] is irrelevant. [LEC 1]*

4.3.2.4 Sub-Theme 4 - High-quality students enrolled

There was a concern raised during discussions with lecturers whereby they believe the calibre of students the college enrolled is not of high quality. They feel that they do not have the capacity or mindset to handle the curriculum. One lecturer, during the discussions, mentioned that the curriculum's standards compare to those of a university and as a result, students struggle to cope with the content. They expressed their views:

> *Some of our students are not at par when they graduate, they need more training to be employable. Some of the students enrolled are not meant to be doing the career they are studying. Students' intake must be of high quality or*

high standards and not just for anyone. I think enrolment is failing the qualification. [LEC 1]

Some student can't even figure out what is wrong with a simple circuit they have built. Then that says there's something wrong with their understanding and thought process. [LEC 4]

We enrol weak students in Math and Science. Average students who lack problem-solving skills. However, some of them when they leave the College, they have acquired some problem-solving skills but not well enough. [LEC 3]

The drive of the College is funding and chasing big enrolment numbers which deduce the quality of students that graduate. [LEC 1]

The curriculum is difficult for a grade 9, it is too advanced. It is university standards however, in theory, it is a good idea, but it is poorly implemented. For them to handle the programme with ease they need physical Science or Science. If you have those subjects when you enrol at the College then, you are trainable. [LEC 3]

The discussions pointed out to the fact that enrolled students are weak in subjects which would get them to excel in programmes they are enrolled for. Besides this, the college seems to be driven by receiving funding as opposed to having highly skilled students that could graduate and be employable. However, four of the lecturers feel that a bridging course must be introduced before students are enrolled at the college. This would help them figure out whether they have chosen the right career they would like to pursue, without wasting time or resources. They stressed:

There's a need for a bridging course where during the screening process, we do not turn students away but they have a six months course where they learn basic hand skills and basic engineering skills to make an informed decision whether they would like to continue or not; it would save money and invest time in those that want to be an artisan. [LEC 2; 3; 4]

There is a need for a bridging course that may fill in the gaps. There should be elective subjects introduced for the weak students so that they may upgrade to the level required by the College to be able to handle the programme they may wish to register for. [LEC 1]

The perceptions of most lecturers are that students cannot be turned away. However, they require guidance as well as bridging programmes to assist them in performing their best and making good choices for their careers.

4.3.2.5 Sub-Theme 5 - Proper career guidance

Another sub-theme that stood out in the discussions is lack of proper career guidance for students when they come to enrol at the college, no-one seems to guide them with the reason why they must choose a certain career. The perception of lecturers is that students do not choose what they want to study but chose a programme that has a vacancy. One lecturer feels that that contributes to wrong students doing the wrong career choice. She feels they do not have enough knowledge of what they are studying. Another lecturer mentioned that this contributes to a very low retention rate after three years of study. They complained:

> *The perception out there is that TVET College is a corrective measure one can upgrade their matric. This is due to lack of proper information and career guidance. [LEC 1]*

> *The students receive poor career guidance consequently, we receive the wrong candidates because they are not even sure why they are doing the course they are doing; they end up dropping out. [LEC 5]*

This view was validated by students as well. The lack of proper guidance seems to be an issue that needs to be addressed. Students confirmed:

> *We feel lost without proper information about our careers. [PSFG 1]*

> *We are not given any guidance during our final year of studies with regards to the way forward after completion. [PSFG 1*

> *When I came to register, I wanted to do transport and logistics, but I was forced to do finance, yet I had no accounting background. So, I have been struggling with the course, I am passing the subject, but I am not confident. [CSFG 2]*

This discussion explains the lecturers' perceptions of the kind of students they receive. They do not have any idea why they are learning what they are enrolled for, and they end up struggling. As a result, they do not finish the three-year course that they have

started. Students' perception is that they work hard, pass exams but are not confident about the career they acquire.

4.3.2.6 Sub-Theme 6 - Industry Relationships formed

The discussions revealed that there are no relationships between the TVET college and industries in this area and if there are, the value of the qualification has not yet been established. There is an awareness of the existence of the college, however, industries do not seem to know or understand what the qualification entails. According to discussions, lecturers feel that there seems to be no campaign or drive to bring awareness of the TVET college qualification as well as institutions to industries. They commented:

> *Industries are not aware of what NC(V) entails. The perception out there is that TVET NC(V) qualification is a corrective measure to upgrade their matric that is so wrong and not true. Some of the topics are not workable at a TVET level. They are not even at an industrial level. The College needs to work with industries so that our subjects service industries around here. [LEC 1]*
>
> *When the technical colleges were under the Department of Labour, employability was possible since industries knew what they were getting from the technical. However, when DHET took over, relationships have been difficult to keep, and we do not know what industries need. [LEC 4]*
>
> *The industries need to work with the TVET sector so that they could have TVET colleges as their feeders. We have prepared students for mid-level skills, so industries should realise that we are saving them time and money. If not satisfied they could advise the TVET college on what to prepare students for. [LEC 5]*

Significantly, there was a consensus that good relationships need to be formed between TVET colleges and industries of the region. Lecturers feel that the NC(V) curriculum needs to be marketed to industries in the same way as NATED programmes.

4.3.2.7 Sub-Theme 7 - Lecturer consultation

A frustration expressed by lecturers is that they feel not valued and, if they are, their opinions are never considered. This frustration is with regards to who are the best

students to be employed when there are opportunities, or what are the best curriculum subject combinations or structures for engineering courses to afford employability, just to mention a few. They make valuable contributions to how TVET college will progress and create employment opportunities for students. Views of two lecturers:

> *We are not consulted for recommendations or curriculum matters and if we are, no one takes note of our recommendations. What has happened to the top students that have exited the College? How do we make sure that the best students get employed? We don't care about the best students once they leave the College. [LEC 1]*

> *An idea that could work for the College in the future is identifying those quality students who could be trained to become trade lecturers hence, creating employment. [LEC 2]*

> *Managers ought to be people of a trade so that they can understand what is required to run a technical college and what is expected in the industry. They would not question the need for a machine at the workshop. [LEC 2]*

Lecturers' feelings of frustrations are perceived as they expressed their perceptions of not being heard. This, despite the college's Skills Academy being dependent on other campuses for quality students to be trained by them for possible employment opportunities. The CM is aware of the need to have additional practical work for students that are enrolled at other campuses. She mentioned that she had noted that other campuses train too many electrical engineering students which forces them to outsource other fields such as civil engineering students from elsewhere. She said:

> *Our feeders are our sister campuses within the Mpumalanga region that give lots of electrical students and we seek outside the province for civil engineering students. [CM]*

This suggests that perhaps other programmes could be introduced at this selected TVET college to enhance a variety of programmes offered, to enhance students' chances of employability.

4.3.2.8 Sub-Theme 8 - Trade/Artisan lecturers

Two of the lecturers feel that the TVET college must have a trade or artisan lecturers. This, they said, because they would be able to do it well as they are usually passionate

about it and not just doing it as a job. They noted that most of the lecturers that teach engineering programmes are not qualified to teach the programmes they are teaching and as a result, they rely only on the textbooks and do not often know what is required. They assert the need to have qualified lecturers to teach prescribed syllabus and to prepare students for the world of work. They explained:

> *Most lecturers are not qualified to teach what they are teaching because they rely on what the textbook says but have no industry experience. Only a mechanic can teach mechanics just as a doctor teaches how to do surgery. Engineering requires trade lecturers that have or are artisan to attract the right people in the industries to trust the quality of students that graduate. [LEC 2]*

> *If there were properly skilled lecturers and a properly structured curriculum, the NC (V) would be a good programme. [LEC 3]*

The opinions of two senior lecturers revealed that some lecturers rely on the textbook and have no knowledge of an actual workshop environment. Additionally, they feel that with properly trained lecturers and well-equipped workshops, the NC(V) programmes can be successfully implemented. The curriculum or NC(V) programme is confirmed to be of quality and if lacking skills can be incorporated, as the discussions have revealed, it will yield value with industries and probably chances of employability.

4.3.2.9 Sub-Theme 9 - Reduce the number of students per lecturer

Large numbers of students in one class is a point of discussion that seems to be shared by all lecturers. They feel that this makes teaching impossible, especially during practical work time. If students are fewer in number, it becomes a perfect situation. They said:

> *I deal with dangerous equipment and since I have 35 students, it's impossible to do proper practical and the time allocated is short. Three hours a week is not enough to work well with the students. One needs fewer students between12-15. [LEC 3, 4]*

> *Large numbers of students are failing the qualification. We work with about 30 - 35 students and they become difficult to handle in the workshop. [LEC 1, 5]*

> *We could structure practical time in shifts to accommodate fewer students at a time since they are so many. I am so stressed during practical time. [LEC 2]*

Large student numbers in workshops is a problem that lecturers wish will be resolved because of the dangerous equipment they work with. Most lecturers wish to have a manageable number of students to avoid possible accidents in the workshops.

4.3.3 Theme 3: Perception of graduates with regards to set skills

This study found that the NC(V) qualification attained by previous TVET college graduates has not assisted in employability prospects. Graduates feel that the programme they qualified for lacks certain subjects and those subjects compromise the relevance of their qualification. A common perception is that no one understands what value is placed on the NC(V) qualification, nor what subject matter it entails. Some students feel that they are not properly informed of their career path and no one markets the NC(V) programmes to industries. They observed that once they graduated, they are forgotten and no one from the college bothers to find out if they have succeeded or found employment.

4.3.3.1 Sub-Theme 1 - NC(V) qualification

The discussions validated students' questions on the relevance of the certificate attained after three years of studies since it does not seem to have any weight when looking for employment. Their views:

> *When I applied with my level 4 certificate from TVET, they said that they do not recognise it they requested for a matric certificate. Luckily, I had one with Mathematics and Science. First entry level they want the matric certificate and then they look at all other qualifications that one may have. [PSFG 1]*
>
> *The mechatronics course needs to be looked at and more money should be invested in it. [PSFG 1]*
>
> *When we did the mechatronics course, it lacked one core subject and we only realized after we had finished the course that it was the most important one. [PSFG 1]*
>
> *We don't know anyone who has found a job concerning the career they qualified for at TVET. Others were hard working and so smart, yet they have not found jobs, it is heartbreaking. [PSFG 1]*

It feels like no one cares about our future career path especially a course like mechatronics. [PSFG 1]

The qualification needs to be looked at to attract industries. They know what's wrong with the qualification. Just fix the problem and speak to the industries to market the subjects. [PSFG 1]

The discussions evoke thoughts of the motive behind the NC(V) programme. They know many students who are acknowledged as top students, yet they are not assisted to find work in their field. Industries do not acknowledge their certificate and the programmes do not have a future career path or it is not communicated to the students. The students feel that they have qualified for a course that lacks core subjects.

4.3.3.2 Sub-Theme 2 - Subjects we need for recognition

The graduates expressed their frustrations with regards to essential subjects they had noted as a hindrance to their employability opportunities. They perceive Science as a subject not offered with engineering programmes and assert that it may be the reason the qualification is deemed of low quality. They shared their thoughts:

The industry requires a minimum of 40% in Math and Science, for English a 50% a matric or N3 certificate. NQF level 4 is not recognized by industries in this region because our minimum is lower. [PSFG 1]

Science should be added to the engineering subjects, that is why the qualification is considered of low standards. [PSFG 1]

If only the College would add Science to their subjects, then Sasol might recognise the qualification and students would not need NATED courses that they recognise. [PSFG 1]

Subjects that make a qualification relevant are a common thread with students who qualified and have encountered difficulties in marketing themselves with their TVET college qualification, that is why they assume it is irrelevant to afford them employment.

4.3.3.3 Sub-Theme 3 - Marketing the NC(V) programme

Discussions led to a very vital issue. Students claim no one has marketed the NC(V) programme to industries. One of the students pointed out that she has Science subjects needed by industries. The subjects are incorporated in elective subjects she has studied at the TVET college. They also feel that their fellow students who are not studying question the value of their qualification because it does not provide them with employment. They asserted their frustrations:

> *We want management to find opportunities and market for us the courses that we have done so that we get recognition. [PSFG 1]*
>
> *No-one knows about our TVET College and what it offers. We have all that the industry is looking for, physical Science but they do not know that. When they look at our qualification, they ignore it. [PSFG 1]*
>
> *When we try to market TVET College to other young people, they ask us why we spent three years at College, and we have no jobs. So, they query if it is working for us and since we have no jobs; the qualification is questionable because there is no evidence of working students. [PSFG 1]*

Although these are their sentiments, most of them feel that the knowledge they gained was not a waste of their time. They believe that the courses they took have been valuable. That just confirmed that NC(V) programmes are good but structured wrongly, and opportunities need to be created correctly so that students can find employment. Otherwise, this makes the qualification to have no relevance in enhancing employment in this region. Students' comments:

> *Engineering fundamentals, I learnt at TVET College has been helpful and useful when I was in china even now that I have a learnership at the petrol-chemical industry. [PSFG 1]*
>
> *Although this is a second matric, I feel my time was not wasted at TVET College, I learnt a new trade and I am confident that I was successful. [PSFG 1]*
>
> *I am satisfied with what I have achieved here since I come from a township school where computer subjects are not taught. Such as pastel and other computer programmes. [CSFG 2]*

Having worked before, it was good to be able to learn information that I can relate to as well as see what mess-ups and how human rights are compromised. [CSFG 2]

I enjoyed the mechatronics course and would love to further my studies at UNISA although I was late for online registrations. [PSFG 1]

The participants communicated the benefits and their perceptions of the NC(V) programmes which show that they have learnt valuable skills and have no regrets. Although, they indicate that they would have wished that more was done with regards to marketing the programme to industries so that the qualification can be acknowledged and provided them with employment.

4.3.3.4 Sub-Theme 4 - Lack of knowledge in relation to a career path

Students highlighted that not enough information is given to them when choosing career paths during enrolment at the college. They often find a certain career that they may have perceived as good for them. However, if their choice is enrolled to capacity, they are often re-directed to the next possible choice which may not necessarily be what they have wanted to study. They shared:

Mechatronics was not my first choice; I came to enrol in IT. I was informed that it is not offered any more, so they requested me to opt for mechatronics because it was closely related to IT… I have grown to love it. [PSFG 1]

I wanted to do an electrical course, but it was full, so I opted for mechatronics although I had no idea what it was all about. Eventually, I fell in love with it. However, I wish there would be more information given to those that are in their final year at a TVET College concerning the way forward. [PSFG 1]

Social work is my first love however, they do not offer it here at this College, so I chose management because I could utilize it in other fields. [CSFG 2]

IT was my desired career and not mechatronics, however, I grew to love it. I wish the course would be looked at and investigated since it is the future, it has lots of fields that stem from mechatronics. [PSFG 1]

The findings show that there is a lack of understanding with regards to the information given and the interests of students when they enrol. The desperation of either to fill up

the programmes and the desire of students not wanting to be idle create a mismatch of career interest versus programmes availability.

4.3.3.5 Sub-Theme 5 – Forgotten after graduation

Students also expressed concern regarding the fact that once they exit the college they are forgotten. No one follows upon them to find out if they have found employment or what they may be doing with their lives. Their views were:

> *They say that their mission is to skill young people for jobs if one skill someone for a job and you do not follow up on them, then the qualification sits just there, it is not useful to them. [PSFG 1]*
>
> *The one top female student of mechatronics, just one, is not working, yet she was the top student. [PSFG 1]*
>
> *The other finance female top student has not found work at any of the banks in the region, why? She now works as a teacher. [PSFG 1]*
>
> *No-one cares what happens to top students after College. If we are not seeing success with the top students, how can we not wonder if this qualification is good enough? [PSFG 1]*

Nonetheless, some students are optimistic that they will find work if they relocate elsewhere. Others feel that the exposure they get during their WBE, is irrelevant and does not serve their career. One student feels that offers of job opportunities at the college are awarded unfairly. They complained:

> *I am not afraid to relocate from here to find a job elsewhere in the country. I think this region is over-populated and it is a smaller town, so job opportunities are rare. [CSFG 2]*
>
> *I wish that they would place us in relevant companies or industries that could offer the experience of a real workshop. [PSFG 1]*
>
> *WBE has been helpful with regards to work exposure in finance. But too short time to experience fully. [CSFG 2]*
>
> *There were jobs advertised and I applied for one, however, they told me since I am enrolled for a Nated programme I am not legible. I thought it was unfair*

because I qualified, and I am enrolled for Nated and I do not want to be idle. I wondered, do I sit at home and wait for that opportunity which might take longer to come by? [PSFG 1]

These findings show students' frustrations with employment and WBE placements. Their perception is that they wish to be placed where they will gain skills, therefore, a need for relevance is essential so that opportunities of employment are offered fairly to students who deserve them.

4.3.4 Theme 4: Set skills required by employers for employment

During in-depth interview discussions, employers indicated that they have set skills requirements that they are not willing to compromise on. They agree that information sharing may be useful so that a clear understanding of what the college curriculum entails be known and understood by relevant stakeholders.

4.3.4.1 Sub-Theme 1 - Minimum requirements for a job opportunity

Grade 12 Mathematics and Science are the minimum entry-level requirements for any trade. The employer added that relationships should be formed to allow Sasol an opportunity to know what they can get from their region. They said:

Sasol requires Mathematics and Science at a matric level or N3. Without this, we don't even look at the qualification. These are their minimum requirements. [EMP 1]

However, the challenge is that their minimum requirements are one industry is not willing to compromise. Learning and development vary, it's not only about artisan and design that requires skill for example survey does not require technical skills, but the requirements are for technical skills. I think that can be looked at so that we could notice on what you offer. [EMP 3]

Your qualification lacks one or another of our minimum requirements. Even your finance is offered with math literacy. Who does finance without pure math? [EMP 2]

Competition is high, there are those with degrees who get first preference. TVET is not considered as a quality qualification. [EMP 1]

Despite strict requirements as well as criticism of why a Finance course would be done without pure Mathematics, one employer was quick to confirm that not all qualifications require Mathematics and Science. She commented that there is a need for their learning practitioner to do a regional needs analysis of the requirements in the region. She said:

> *All qualifications do not require Mathematics and Science but since it's a big company it gets away with these requirements. As I mentioned a learning practitioner does not require technical skill. This is a needs analysis search then they give feedback to the necessary department to be able to implement with their need's requirements. [EMP 3]*

> *Sasol has started a YES programme to give practical opportunities for all fields and not necessarily requiring technical skills, without a promise of employment for all university, Matric and TVET College graduates in this region for 18 months. [EMP 1]*

Findings confirmed that opportunities are there which could be explored to award students a chance for an internship or apprenticeship and they are offered across all fields.

4.3.4.2 Information sharing on what programmes are offered at a TVET college

The discussions led to useful information requiring urgent implementation. This may be an opportunity for students to find employment. One employer suggested the need for talent management programmes for industries in the region to identify available opportunities within their region. Such would be colleges in the region where they could outsource talent and for industries to share what they look for or may need. She said:

> *Talent management is required for our industry so that we could see TVET College opportunities around. We would have someone recognise that there is a TVET College with these qualifications and we form a relationship that requires us to out-source from outside our industry as a requirement. [EMP 3]*

> *Sasol should have an educational programme where they invite all Colleges around and share their minimum requirements so that TVET Colleges could get their students ready or prepared for what they need. [EMP 3]*

The employers added that the industry has opportunities for local schools and colleges to exhibit their talent or get exposure to what industries requirements may be. They stated:

> *The company does "Techno Tech" each year where they expect Colleges to showcase what they offer. A good place to market yourselves. [EMP 3]*
>
> *With this kind of opportunities, then TVET should be given the first option. [EMP 2]*

The discussions confirmed that the college could explore the opportunity to market programmes offered at the college as well as students' talents.

4.3.4.3 Working Relationships between industries and TVET College

Findings revealed that industries in the region do not know about TVET colleges nor what programmes are offered. If they do, they disregard the college's qualifications and have no relationship. This was validated in her statement:

> *The YES programme started last year which is strictly for the youth of the area who are at the university, matric or TVET. This programme was one that would have developed a relationship with the industry. It is meant to give an on-the-job training in all fields for eighteen months with a R5000 as a stipend. However, this year we struggled to find candidates. We even lowered the requirements to get technical students, but we found none. I wondered if there were any Colleges in the area and why we do not have relationships. [EMP 3]*
>
> *As an HR manager, I struggled to find good talent so we ended up phoning around to find anyone who might be interested in joining the YES programme. If I was aware of a TVET College, I would have come to seek recommendations. Which shows that we have no relationship. [EMP 3]*

Relationships are important as confirmed by the employer to award students such great opportunities that the youth of this region need. Findings revealed the desperate need for young people to showcase their talent. On the contrary, there are many opportunities missed due to lack of proper relationships formed between the industry and the TVET college.

4.3.5 Theme 5: Interface as defined by the TVET college stakeholders

TVET colleges are best suited to be in collaboration with industries and hope to close the gap of youth unemployment in the region. There is a need to work as a team, TVET colleges instil skills in students that most industries require, and with collaboration between the stakeholders, skills are a perfect match. The Deputy CEO Academic explained that there was a prior presentation he had shared with Eskom's Majuba power station of how the collaboration could work. He added that there were relationships that have been established with some industries in the region. He proclaimed:

> *I had made a presentation at the Majuba power station of how we were a better College to collaborate and even shared what we offer concerning their needs, but that went quiet. If we can get the industries to understand that we are a better matric than the academic matric, employment would be feasible. [CA]*

> *We have relationships with the companies around this region and when we do meet, we discuss all these issues from employability to a collaboration. However, maybe we have the wrong relationships or have been asking the wrong questions. [CA]*

> *As a College, we have SETA on board as a relationship we have formed so if we cannot produce artisan, we are failing. [CA]*

Another discussion with the Skills Academy campus manager revealed that right relationships that need to be formed are with managers, supervisors and junior employees because they are the ones who would implement suggestions agreed upon. Even though they may require a change of mindset, she said:

> *Managers, supervisors and below are the best relationships to form. Since they are the employers and they might be the ones to help, even though the supervisors are the most resistant. [CM]*

> *We need to get the industries' mindset right so that they would know we offer a better matric than the one they seek. [CM]*

Stakeholders agreed that they need to convince industries that they offer the best NQF Level 4 qualification and produce the best calibre of students who compete

internationally. The campus manager pointed out that industries are ignorant about NC(V) programmes and preferred NATED courses. The campus manager said:

> *The industry's mindset needs to be right so that they may know that the NQF level 4 we offer is better than the matric they seek. We have a student who is our product as a bricklayer and he will compete at the world skills internationally in Russia on the 22 – 27th of August 2019, representing the country. [CM]*

> *Employers are ignorant about NC(V) and they prefer NATED qualification. They are not willing to change for the mess the country is in. [CM]*

Findings confirmed that managers are passionate about TVET programmes although they seem to struggle to convince employers that they have exactly, and even better, of what they seek.

4.3.6 Theme 6: Nature of the interface

There is a possibility of industries working with TVET college where they collaborate in terms of curriculum matters and internships, including employability prospects. Notably, the curriculum needs to be assessed again to suit the industries' needs. The CEO Academic Affairs noted that a curriculum change may be of value to industries. One employer mentioned that they need to educate TVET colleges about their requirements. There seems to be an understanding of the nature of the interface from the employer and the college. They said:

> *The curriculum needs to be looked at to serve the industries' needs. For example, the theory component can be done in level 2 and 3, then for the final year level 4, they could go to the industry to get skilled by working there. [CA]*

> *The industry needs to educate the TVET College on what their requirements are and have good working relationships where we are aware of what the other entity has or requires. The learning developer is the one who needs to come and scout for what talents you as TVET have, and inform HR about the new pipeline discovered, meaning they should build relationships with you. However, they are not willing to look outside the company. [EMP 3]*

Discussions brought about the need to collaborate in producing high-quality students that are really interested in engineering and well prepared for the world of work.

However, there may be a challenge since employers are never willing to look outside the scope they have established. It seems like if this collaboration were to work, placing students in the right industry as well as the right places for WBE would be easy. One lecturer agreed. He shared:

> *We need to produce artisans who would get employed and without proper TVET and industry relationship, we are failing the students. Our programmes' subject matter ought to service the industries of this area. We should be placing students at correct industries so that they may have workshop exposure. [LEC 1].*

One lecturer participant stressed the need for the college to serve students, industries and itself, all three have to go hand in hand. One lecturer queried:

> *Where are the student, industry and the College in our logo and slogan? If the industry would query what the core business of the College is, what would the answer be? If we are not serving the student, then who are we servicing? There is a need to make sure the students get employed by industries in this region. [LEC 1]*

The findings advocate that students need to get employment if they have a trade, and more so, that the industry need to be satisfied with the quality of students prepared for the world of work.

4.3.7 Theme 7: Enhancement of students' employability

To enhance students' employability, proper information about courses and career guidance need to be given during enrolment for engineering courses. Other solutions such as screening students who are truly interested in engineering need to be implemented and will enhance students' employability. These views are shared by most participants. They asserted:

> *Some of the subjects we offer require an excellent student not just any student with Mathematics and Science. The retention rate in an electrical course is dismal. We start with 120 students at level 2 and three years later 20 students graduate. What happens to the 100? [LEC 1]*

We need highly qualified students so that they are teachable. Often, average students enrol for engineering subjects who are weak in Mathematics and Science. They lack problem-solving skills when they leave the College, they have some knowledge but not enough for them to be employable. [LEC 2]

Some of the courses that we offer can be done at a high school level. Such as business studies course, however, the engineering subjects can be offered at a TVET level. Our skills academy would do the practical component and industries could assist with the practical component, if they are willing to collaborate. [CA]

They need six months bridging course to close the gaps that they may have. [LEC 2]

Those who don't meet the criteria of Mathematics and Science would do an elective to supplement in physical Science or Science giving them time to figure out if they really would like to continue with engineering or not. [LEC 1].

The findings reveal a collaboration that may be the solution to the problems the TVET college face. The CEO and a lecturer shared their thoughts as follows:

TVET providers hope to service the local industries and be able to attract employment for their students. [CA]

If we had good relationships with the industries, then we would be requested to do the theory component and the industries would skill them or attend our skills academy to be properly skilled because we lack proper workshop equipment. [LEC 2]

Another consideration noted is to enhance the relevance of the NC(V) qualification, to market it thoroughly and explain what it entails to be accepted by industries. Some commented:

Make sure that the qualification is accepted by industry standards and it is of quality. Marketing the curriculum to the industries is essential. [LEC 5]

Industries need to be open to recruiting TVET College students in their YES programme because what we offer is what you as a TVET College would want for your students hence, we form relationships. You give us your best students

and we interview them. No need to struggle to find students like we did this year. [EMP 3]

The discussions found that collaboration may be a workable solution for both industries and TVET colleges of this region. Findings also confirm that the industries need graduates for their YES programme that was established for the youth of this region.

4.4 DATA EMERGING FROM DOCUMENT ANALYSIS

The data presented in this section are obtained from different documents that were analysed. The documents examined are from the NC(V) students' Engineering certificates, college brochures that show subject content of engineering courses offered and job requirements advertised in a local newspaper.

The college offers various engineering courses across the seven campuses, however, the researcher found that the campus which the study was based on, offers three programmes, namely Electrical Infrastructure Construction (EIC); Engineering & Related Design (ERD) and Mechatronics (Mech) in the engineering sector. The students' certificates show subjects examined and the pass mark achieved by students. There are four core subjects related to the programme chosen and three fundamental subjects which are English, Mathematics and Life Orientation. The brochure shows EIC, ERD and Mechatronic have six core subjects related to the programme. The in-depth interviews reveal that programmes lack a key subject component. All the engineering lecturers agree that the theory component of the programmes is well put together, although, in some of the courses such as Mechatronics and ERD, it lacks the main core subject, which appears as optional. One lecturer questioned.

How can a core subject be optional, and it is the makeup of the course itself? [LEC 2]

The advertisements revealed that most companies are looking for an N3 or matriculation certificate, a trade test and a driver's licence. These target millwrights, electricians and underground miners. A trade test is a course that is not offered at the TVET college except at skills academy and is therefore not part of an NC(V) engineering programme. However, with an N2 qualification, a student can acquire a trade test. This compromises employment opportunities for graduates because TVET

NC(V) NQF Level 4 is a Vocational certificate without a trade test qualification. Meanwhile, one of the lecturers who is so passionate about TVET college tuition felt the N3 is attractive because it offers a trade test. He explained:

> *This National Intermediate Certificate (NIC) N1, N2, N3, as well as National Senior Certificate (NSC) N4, N5, N6, which is the old technical College system is the preferred system by the industries because they understand it. It is not so much different since N1 is L2; N2 is L3; N3 is L4. [LEC 2]*

He indicated, if industries are to acknowledge the NC(V) qualification, relationships that allow them to see what they can do or cannot do, they will structure it like a workplace environment and these students will have the opportunity of employment. He added:

> *In my previous employment, we had well-equipped workshops where we imitated a proper workplace environment and students would even clock in and clock out. We prepared them for employment. When they entered the technical College, they would have a bridging course for those without Mathematics and Science. The bridging course allowed the students to do a few various trades and after three months the students knew what trade they want to pursue plus 900 hours of apprenticeship experience (practical), so they found work immediately. [LEC 2]*

The participant explained the meaning of the word ‘vocational’. The word itself stands for working, he elaborated:

> *If we have no imitation of a workplace environment, what are we teaching this student? When they are interviewed, one checks what they know in terms of the workshop experience such as, how does your toolbox look like, readings etc. If one can’t showcase this then, they are not employable. Therefore, industries prefer N3 since they come with enough practical experience. [LEC 2]*

Practical experience for TVET college students, as findings reveal, is the most important subject that will give them a chance to be employable. Participants and employers have confirmed that various components require attention so that students may have successful employment prospects.

4.5 SUMMARY OF THE CHAPTER

This chapter presented the analysis of the data triangulation collected through focus groups, in-depth interviews and documents reviewed. The findings show that there is very little opportunity for students to acquire employment in industries of this region with the current TVET qualification. Findings offer various solutions that may be looked at by DHET, stakeholders, employers and curriculum developers to enhance employment prospects for the youth of this region.

The next and final chapter, chapter 5, contains a summary of major findings reached, conclusions and also makes recommendations.

CHAPTER FIVE: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In chapter four, the analysis and presentation of research findings were given. In this chapter, a summary of major findings is presented, conclusions are reached, and recommendations are made. The rationale for the study is derived from the researcher's intrigue to determine if TVET college graduates can attract employment after completion of a TVET college NQF Level 4 certificate, as many are from low- and middle-income families. The research found that there are opportunities for TVET college graduates in Mpumalanga to become constructive employee feeders for industries in this region as this province has a large petrochemical plant owned by companies that run and own mines. There are coal mines and other industries that can be serviced by the TVET college graduates. Youth unemployment, which is on the rise in Mpumalanga, should not be as high as it is if a TVET college that skills youth with relevant specialised mid-level occupations exists in this region (Gewer & Akoobhai, 2013).

One influential observation that the researcher noticed is the lack of employment impact that TVET colleges have on these industries or as feeder employees. The main purpose for TVET colleges is to train youth to acquire skills for employability and serve the needs for industries within their region, notably, graduates relying on on-the-job training (Killian & Mutandwa, 2016).

5.2 OVERVIEW OF CHAPTERS

Chapter 1 – In the first chapter, an introduction to the study focused on outlining the background and motivation of the study, and the problem statement. The aim and objectives of the study were also clearly presented. The theoretical framework of the study, including methodology, were briefly explained. Data collection and analysis were explained in this chapter. It concluded with concepts and acronyms used in this study.

Chapter 2 – In the second chapter, a literature review on the employability of TVET graduates with a focus on a selected TVET college in Mpumalanga was discussed. It had an introduction followed by a geographical and demographical description of South Africa. An explanation of TVET colleges in South Africa and key concepts were

defined. This was followed by a clear definition of both TVET college graduates' and lecturers' expectations and perceptions. Employability definition and its key concepts were elaborated and a research gap on skills acquired and skills required by industry was stipulated.

An overview of the literature review on studies conducted both at local and international levels revealed that:

- College graduates are deficient in some skills needed for their employability. Thus, high schools and TVET colleges seem not to be preparing these graduates properly for employment.
- There is an existence of a gap in skills acquired and skills required. More so, there were insufficient studies conducted on employability of technical college graduates in South Africa.
- It was also observed in the literature reviewed that studies conducted at both local and international levels do not consider policy documents on the type of skills recommended alongside lecturers, graduates and employers.
- There seemed to be a major gap in the TVET college syllabus which has brought about a major research gap. Skills are regarded as key essentials to acquiring employability and therefore if there exists a mismatch, employment for these graduates will not be a possibility.

Chapter 3 – The third chapter elaborated on research methodology used in this study, as well as a detailed description and justification of the research paradigm, research design and approach. Data collection procedures and analysis, ethical considerations, trustworthiness and validity in additional limitations of procedures used to answer the research questions were presented. A sampling method used to select participants was also discussed.

Chapter 4 – In the fourth chapter, research findings and analysis were explored in terms of themes. The purpose of the study was to understand why graduates with a TVET qualification do not attract employment in this region of Mpumalanga province. This chapter referred to data collected during semi-structured interviews, focus groups and document analysis with participants from a selected TVET college in Gert Sibande District Municipality and employers in the province. Five lecturers, one Campus Manager, one Deputy CEO Academic Affairs, one Student Liaison Officer (SLO), three

employers and two focus groups were interviewed to establish the trustworthiness of their responses. Documents such as college brochure, students' NQF Level 4 certificates and advertisements of employment in the local newspaper were obtained and studied. Collected data were discussed in terms of the aims of the study and research questions.

Chapter 5 – This last chapter presented a summary and discussion of the research findings as well as delimitations and limitations of the study. It reached conclusions, made recommendations from the findings of the study and proposed suggestions for future studies on the research theme.

5.3 SUMMARY OF MAJOR RESEARCH FINDINGS

- The main research question was: What can TVET providers in Mpumalanga do to ensure that their qualifications are relevant to enhance students' employability?

To answer the main question, the following sub-questions were asked:

- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as perceived by lecturers?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as perceived by graduates?
- What are the sets of skills that graduates from TVET colleges in Mpumalanga need for employability as required by employers?
- Is there an interface as defined by TVET college stakeholders? If so, what is its nature?
- What can TVET providers and employers in Mpumalanga do to enhance students' employability?

Research question 1: What are the sets of skills graduates from TVET colleges in Mpumalanga need for employability as perceived by lecturers?

5.3.1 Theme 1: Sets of skills that graduates need for employment as perceived by lecturers

The theoretical framework for this study was based on productivists' assumption that skills lead to employability (McGrath 2012:624). Similarly, it also looked at Bourdieu's

(1992:119) theory on social capitalism to explain the reality of social inequality based on employment opportunities and way of living.

In this study, all lecturers agreed with the productivists' assumption that skills lead to employability but had their reservations on this theory since skills for each programme they instilled in TVET graduates lacked one of the most essential subject matter components due to lack of properly equipped workshops. They were in consensus that unless the issue of well-equipped workshops was addressed, these graduates do not have a chance in industries around this region. Gafieldien (2016) claims some issues affecting many TVET colleges are outdated machinery and a lack of placements of students in industries. This has made it impossible for TVET colleges to equip students with much-needed practical work. Lecturers perceived this as one skill that makes an artisan qualification relevant since it allows exposure to the workshop experience. The study found that there were possibilities for graduates to access employability opportunities, however, they were not easily accessible to TVET college graduates with their qualifications.

Findings reveal that subjects such as Physical Science, Life Science, Mathematics and problem-solving skills are necessary for all engineering students because. However, most students that were enrolled are weak in these subjects and lack problem-solving skills. Lecturers expressed frustration since the retention rate is low, high numbers of dropouts and most students find the subjects hard to grasp even though science was not offered at this TVET college (Akoobhai *et al*. 2016).

Skills acquired by TVET college graduates to get recognised by industries in this region of Mpumalanga do not quite match what industries are seeking in TVET graduates of this selected college. A key element of responsiveness is that colleges should better understand their local labour environments and service their needs with regards to employability. Too many colleges have been producing graduates in trades that are already swamped or where there was no local market for such trades. This is a problem for some South African colleges as expressed by the Skills Academy Campus Manager. There were too many electrician graduates trained especially in Mpumalanga while there was a demand for civil engineers.

The study found that curriculum developers do not develop curriculum in consultation with industries' needs. Badroodien and Kraak, (2006) argue that high-quality, relevant education and training provide skills and attitudes required for employability. Similarly,

colleges must be aware of the possibilities of training for appropriate provincial, national and regional labour markets (King & McGrath 2002).

5.3.2 Theme 2: Sets of skills that graduates acquire lack employability component

Hillage and Pollard (1998:2) suggested that:

> In simple terms, employability is about being capable of getting and keeping fulfilling work. More comprehensively employability is the capability to move self-sufficiently within labour market to realize potential through sustainable employment.

Employability has not been realised by students of Mpumalanga as found by this study. Employment has been experienced through Work-based experience (WBE). The study found engineering students do not get placed often in programme-related employment, and as a result, they are not able to experience work-based potential through sustainable employment. Other students have not been successful in finding work or an internship. The study found that students that are currently in employment stressed that it was not their TVET qualification that got them placement but their academic Grade 12 certificate which they had acquired before enrolling at the TVET college. This confirmed that the majority of graduates at this selected TVET college have second matriculation (Grade 12 certificate) and they graduate at TVET college after three years of studying with minimal chances of employment possibility.

Harvey (2003) refuted the notion that once a student was on a vocational course, they would be employable but it was rather about lessons learnt that showcase abilities a person has, coupled with creating experiences that develop critical, reflective abilities, with empowering and enhancing a learner at the core of most of their learning that makes graduates employable. This study found it was a reality for students of the selected TVET college not to be employable considering that there were skills that their vocational course lacked. Coupled with poor career guidance, optional core subjects and lack of properly-skilled lecturers. One student participant mentioned that there were job opportunities advertised by the TVET college but since she was enrolled for a NATED (N) course, she was not eligible to apply. These students have developed some critical, reflective abilities and have not been empowered

successfully. Thus, graduate capital as found by Tomlinson (2017), which deliberate benefits and advantages onto individuals was lacking.

The researcher expected or hoped that if a student found an opportunity for employment especially one that a TVET college has or had an influence in, the college would be encouraging a top student like this one to apply for that employment since they are likely to make a name for other TVET college graduates in future. This would create industry interest in TVET college graduates and as a result, relationships would be formed and students would be empowered and employable.

McGrath and Akoojee (2007:423) asserted that part of the explanation for high unemployment in South Africa is because economic growth has not been high enough over the last 30 years. Equal access to quality education and training at all levels provide necessary skills, competence and knowledge required to strengthen and improve the South African economy. Researchers agree with this statement as the quality of some of the students that enrol at college are weak in Mathematics and Science. As one lecturer said, the students require extra classes, or they miss classes since every subject becomes too difficult for them. Mathematics is a subject they all struggle with and this starts from their high school years. The quality of qualifications offered at the TVET college has to offer proper skills that are required for employability so that graduates will contribute to the economy of South Africa. Most of the TVET college students do not progress successfully through their programmes, resulting in narrowing the pool of highly skilled workforce.

Relationships between TVET colleges in Mpumalanga and industries in this region are not strong. Some industries are wary of the NC(V) syllabus because the NC(V) programmes do not provide students with enough practical workshop skills (Papier *et al*., 2016). This study agreed with this statement made by lecturer participants, the most important skill was given the least time. Equally important, workshops where students are expected to do their practical work, are equipped with outdated machinery that make it impossible to validate their employability upon graduation.

Most lecturers in this study felt that these students were not employment-ready because they are not prepared properly. They lack enough practical work experience to find employment in the industries and the curriculum lacks some core subjects which make up an actual component of programmes offered at the TVET college.

According to Rees, Forbes and Keble (2006), these skills and other related attributes that enrich a person's employability are in most cases those which formed the foundation of learning and the application of the subject area. Vocational type of education is associated with keeping jobless people off the streets, decreasing youth unemployment, and feeding industry with skilled middle-level professionals (Agrawal 2012; Ziderman 1997). This study's findings disagreed with this statement as most students are still jobless and, in the streets, while having a vocational certificate from the selected TVET college in Mpumalanga. This vocational education, as the study found, lack essential core subjects, or they are optional, thereby making vocational education not relevant in this region. It would assist students if employers and TVET college stakeholders consulted with lecturers so that they would solve this issue as they work with the students and the curriculum, and they understand the essential traits that make this qualification relevant.

Needham and Paper (2011) noted that while students sociologically associate TVET college education with lower status employment, both school learners and college students see TVET as a superior form of education that may bring employment. The researcher asserted this to be true for graduates of Mpumalanga, their dream had always been to graduate at a TVET college and immediately hope to find employment in the industries in this region. On the contrary, this is a dream that was fading away quickly as many graduates confirmed in this study. It was taking too long for them to be employable. Some even question the relevance of their qualification because students graduate and remain unemployed for years or find temporary contract work that has no relation to what they studied for three years.

Research question 2: What are the sets of skills graduates from TVET Colleges in Mpumalanga need for employability as perceived by graduates?

5.3.3 Theme 3: Perceptions of graduates with regards to set skills

Graduates' perceptions have sparked questionable concerns about TVET qualifications. They felt uncared for, especially once they were out of college. Some even expressed their concern with regards to top students' lack of employment. The LMIP (2016:86-87) report noted that the level of education in South Africa is lower than in most economically productive countries. These poor outcomes in schooling systems have a major impact on the quality of students who choose to enrol at a TVET college or university. This affects several TVET graduates who could provide useful skills set

to support economic growth, making it fewer than enrolled. The status of South African TVET colleges has remained stagnant, if not the same, with few students getting employment.

The study found that students shared the same perception about enrolling for careers that they had no understanding of or what the careers entailed. No one guided them properly about what to expect or which possible employment prospects were available after completing their course. A significant point made by Papier (2009) in their research was that most of the registered learners knew what career they wanted to pursue and were interested in the occupational field they chose. This is not a true reflection of the students of this Mpumalanga region. Many complained that they were assigned a career, and if they had one in mind, it was not because they knew what it entailed. Many are faced with a situation of certain careers being full due to high volumes of enrolment and they would end up being stuck with the next possible career alternative. This study found that this is true for most students although they eventually enjoyed the career. Some students were not satisfied three years later.

One lecturer confirmed that students enrolled for an electrical course in big numbers at the beginning, however, by the third year the retention rate revealed a disturbingly small number. Entry requirements for employment are high and so capped at these industries that a mid-level qualification of a TVET graduate can never have a chance at these industries. Therefore, there were no employment possibilities for these TVET college students unless relevant relationships are formed and stakeholders market the TVET college qualification.

The study also found that TVET college students are motived by the hope that they may find employment at industries in this Mpumalanga region. Graduates expect stakeholders to motivate the qualification by making them fall under the category of 91% who are motivated by prospective employment (Tse & Wilton 1988).

Research question 3: What are the sets of skills graduates from TVET colleges in Mpumalanga need for employability as required by employers?

5.3.4 Theme 4: Sets of skills required by employers for employment

This study revealed that industries in this region of Mpumalanga require a minimum of Mathematics and Science as matriculation subjects. This means that the TVET college graduates who wanted to enter the employment market were not considered because

Science did not show on their certificates. Another reason they were not considered is the fact that employers do not acknowledge the TVET college qualification. Social capital is defined as the sum of resources, actual or virtual, that an individual or a group mount up by possessing a durable network of institutionalised relationships of mutual acquaintance and recognition (Bourdieu & Wacquant 1992). Relationships were essential to award graduates a chance of tapping into these opportunities of social capitalism.

From the analysis done by LMIP (2016), properly types of skills mismatch relating to skills and the economy were identified. They are an educational-supply mismatch, demand mismatch and qualifications-job mismatch. The implication is that there would be less qualified people (qualification gap) in case of qualification-job mismatch. This implies that there are various types of imbalances between skills offered and those that are needed in the world of work. For those with TVET qualifications, the minority of them worked as technicians and associate professionals (LMIP 2016:87). Researchers agree with this finding. It appears that TVET colleges have trained graduates who have no hope of ever finding employment. This puts them in the category of qualification-job mismatch, education-supply mismatch and demand mismatch. Students are qualified but most are not employable, they have an education supply and no demand for that education.

According to recent research done by Papier, Needham, Prinsloo and McBride (2016), it was found that relationships were not so strong, and companies have specific requirements they expect new entrants to acquire before they could be employable. These were a range of practical, academic and attitudinal skills. The question remains, "What chances do these graduates have for them to enter the world of work?" Practical experience is a skill that this study found to be lacking at the TVET college, and if not addressed, the graduates will have no opportunity of ever affording employment.

Research question 4: Is there an interface as defined by TVET college stakeholders? If so, what is its nature?

5.3.5 Theme 5: Interface as defined by the TVET college stakeholders

There was a need for industries in Mpumalanga to form relationships with TVET colleges in the region. They would give insight into the curriculum and various programme development to suit industries' needs. This was elaborated by all

participant lecturers. Collaboration between industry and training institutions provide opportunities for industry to participate in curriculum and programme development (Borkar & Paturkar 2013).

There has been one partnership that was formed between Gert Sibande TVET College Skills Academy campus and Sasol in Mpumalanga. The tripartite consists of relevant SETAs, Gert Sibande TVET College and Sasol (Loynes 2019). This relationship, as the Campus Manager of the college states in this study, is new and was opened to all sister campuses in the region at Evander, Standerton and Ermelo, just to mention some of them, are their feeders. However, they can only assist very few students, 30 in number, because more spaces are reserved for civil engineering students. They are flooded by electrical programme students who make up the largest number of trained graduates by sister campuses. Partnerships required SETAs to do quality assurance of the programme and Sasol to provide funding and on-the-job training, and the college offered teaching and training (Loynes 2019). This kind of relationship was beneficial to all TVET colleges in this region and the researcher questioned how this campus manager got the right relationship for her campus. Though other Gert Sibande campuses are part of this relationship, the impact is insignificant considering the number of students they can accommodate is funded by Sasol.

It presented a very dim situation of most TVET colleges where the government would have hoped that TVET colleges would be adopted by industries to offer much-needed practical opportunities and help develop teaching-learning material as well as build institutional management capacity for TVET colleges (Ramaphosa 2015). McCash (2006) argued that a model was over-reliant on a mechanistic matching of person and environment. However, it was evident that this country, especially industries, need skilled labour. One lecturer said the world requires people who can manufacture, build and create. TVET graduates could offer mid-level skills if they were given an opportunity and were skilled properly. It would cost industries less money and time to prepare them for additional skills. This would cut costs for training and apprentices.

The researcher's opinion is that industries in this region should give TVET college graduates an opportunity by awarding them employment. McGrath and Akoojee (2007) noted that South Africans' level of inequality is among the worst in the world. Inequality in education and training contributed to the shortage of a skilled workforce, which affect the economic development of the country. The qualified and skilled

workforce is in short supply. People were not given the opportunity to acquire the skills necessary for employment and economic development. Many years later this statement stands true in this Mpumalanga region which has a high rate of inequality with regards to employment.

It is clear, that a lot still needs to be done with regards to industries and TVET colleges' relationship or partnerships in this region. A misunderstanding exists, or as highlighted by both employer and TVET providers, resistance is a big issue. No one wants to change what has been the practice for so long, whether it works or not. This is being directed to employers and TVET college stakeholders who do not seem to be trying hard enough, both leaving it at status quo level, and the TVET college students are paying for it.

5.3.6 Theme 6: Nature of interface

Skills development has been recognised as a valuable tool for meeting both social and economic aspirations in South Africa (Akoojee, Gewer & McGrath 2005; RSA 1998). Lecturers voiced that NC(V) curriculum is not terrible but implemented wrongly, and few courses lacked integration of core subjects. However, there is a need to improve the way TVET colleges are run. If nothing was done to improve the relevance of qualifications to meet industries' needs in this region, chances of making a difference with regards to the employability of students were almost impossible. South Africa, like many other countries globally, seeks to close the unemployment gap by equipping its citizens with skills for employability. Poverty is rooted in unemployment, as Seekings (2007:15, as cited in Bangalu 2015) lamented:

> *… low-quality schooling, poor links into urban and industrial labour markets, and growing capital-intensity of production in most economic sectors resulted in the growth of unemployment among unskilled workers and of mass poverty among them and their dependents.*

This is a gap that will grow wider if issues found were not addressed. Having industries not open to give TVET college youth a chance to develop their mid-level skills after graduating is an obvious contributor to high unemployment numbers in this region which is so rich in resources. Another apparent factor is a lack of relationships and collaboration between the employer and stakeholders. If not addressed, the youth of

this region would have no hope of ever becoming an artisan, a skill this country desperately needs. Challenges facing current national development include inequality, poverty and unemployment (Akoojee 2008b). Mpumalanga province has a high rate of inequality, poverty, and most of the TVET college graduates are unemployed. As expressed by Minister Nzimande (2014), students were unable to find employment after the completion of their studies and were without employment opportunities. This implies that their education is meaningless, purely educating them for unemployment.

Social capital is defined as the sum of resources, actual or virtual, that an individual or a group mount up by possessing a durable network of institutionalised relationships of mutual acquaintance and recognition (Bourdieu & Wacquant 1992). The unemployment gap will increase in future if proper relationships were not formed and a huge drive to bring awareness to industries that a TVET college exists. On the other hand, TVET colleges need to improve on students' pass mark from an average pass mark of 30% in Mathematics to 50% and add a Science subject to their curriculum for engineering students, so that industries would give TVET qualifications a chance.

Social capitalism explains that the reality of social inequality is based on employment opportunities and a way of living (Bourdieu & Wacquant 1992). Social inequality is an issue that needs to be addressed because industries in this region require strictly Mathematics and Science subjects besides technical skills. It becomes very difficult for students to enter an industry environment when employment opportunities are not available to them. According to Khandu (2014 as cited in Thindwa 2016), industries required more than just technical or specialised skills in TVET college graduates, they required addition of customer focus and motivation.

The establishment of vocational education was motivated by the following three principles (National Academy of Science 1976:2-3):

- The primary focus was on the needs of the students and those of society.
- There was a special effort to meet and serve economically and socially disadvantaged students.
- There was a high degree of flexibility for vocational education students to choose careers and change occupations.

Research question 5: What can TVET providers and employers in Mpumalanga do to enhance students' employability?

5.3.7 Theme 7: Enhancement of students' employability

The TVET college sector has an important task of capacitating students with knowledge, skill and behaviour needed for employability. To fulfil this task, constructive liaison is needed between employers and the sector. If this task is addressed, the students' employability problem would be solved.

Aspirations to develop and provide skills necessary for economic and social developments have led to legislative approvals of skills development laws and initiatives, which include, among others, the Skills Development Act No. 97 of 1998 (RSA 1998), National Skills Fund (NSF), and Accelerated and Shared Growth Initiative in South Africa (AsgiSA) (RSA 1998; McGrath & Akoojee 2007).

Students' desperation to attract employment is valid and based on the principle of demand and supply, the relevance of their qualifications must be worthy of companies' scarce employment opportunities available. What they need from industries are employment_opportunities to apply the knowledge and skills acquired from TVET college training and a chance to further develop those skills.

This study found that information was not readily available to the students on various employment opportunities and, therefore, it underplayed critical issues such as social capitalism. This statement would ring true since this TVET college had not been able to match the students with possible employment in their environment. Equally important, this TVET college had not been able to get their qualification acknowledged by industries in this region of Mpumalanga.

The question that remains to be answered is whether students who are on a vocational course are employable? Various researchers proved the struggle for jobs of a TVET college student was real. Papier (2009:24) differentiated between three categories of students, namely those who are idealistic and future focus, those who are interested in the occupational field and those who are in a programme by default.

The first category Papier (2009:24) and Ebrahim (2013:9) identified as a series of a common reason for registering at a TVET college. They had:

- A desire to improve their standard of living
- To find a good job
- To fulfil their dreams for future success

- To develop careers
- To become ‘something in life’

Most students that enrol at this selected TVET college in Mpumalanga would be well described by the first category. They see a TVET college certificate as one that will fulfil their dreams of becoming someone in life. Their drive to be enrolled at this TVET college is always motivated by the fact that they would be employable and work for these industries around the TVET college. When employment opportunities diminish, they question the relevance of their acquired qualification.

5.4 CONCLUSIONS

The study explored a phenomenon that may be deemed to be workable and alleviating unemployment issues in South Africa. It also explored reasons why there is a high rate of unemployment among the youth who attain a TVET college qualification and remain unemployed in a region that is rich in resources and has many employment opportunities.

This study revealed that there were possibilities of young, newly-qualified and skilled recruits taking up positions at industries. Unfortunately, there are no proper relationships formed with industries and no one, or in some instances, few from industries know what TVET colleges offer, or if colleges speak to industries’ needs. There is also no interest from industries to understand what the NC(V) curriculum entails or if it met industries’ requirements. It is clear from the findings that lecturers, employers, CM and CA would like to establish a working relationship that would afford employability to NC(V) students. The employer in the study was open to having a relationship with TVET college stakeholders to see what kind of collaboration would suit both their needs. A general understanding of the lecturers is an openness for assistance in properly equipping workshops and liaising with industries to find out what industries’ needs are and prepare NC(V) students for their market.

5.5 RECOMMENDATIONS

The following recommendations emerged from the findings of this study:

5.5.1 TVET stakeholders

- Qualified career guidance personnel who understand TVET college programmes’ subject matter curriculum, to give proper guidance to students

when they enrol. This will reduce the high number of dropouts and wastage of government funds and resources.

- Managers and lecturers should be skilled with a trade or exposure of industry experience to understand what workshop requirements entail and what kind of equipment will create an environment that makes a learner desire to become an artisan.
- Campus managers should engage with industries in their environments, enabling them opportunities to visit industry workshops and create the right relationships that will yield a working collaboration.
- Consider placing or finding work for top students that exit the TVET college, to restore the credibility of the TVET college qualification among NC(V) students.
- Openness to discuss or engage employers on how collaboration will work.

5.5.2 DHET

- The DHET should look at students' entry-level requirements for a graduate with a matriculation certificate enrolling at TVET college and seeking to acquire a vocational skill versus pursuing a career at the university.
- DHET should consider centralising all TVET colleges with specialised qualifications that are required or offered by industries in their environment. It will encourage industries to adopt a college with the focus of a college becoming their feeder when graduates complete their studies. Industries will influence what is taught and what they require so that unemployment and skill-demand mismatch are reduced.
- DHET should consider introducing a bridging course of three to six months to the TVET college curriculum, so that students are well prepared for the career they are about to embark on, to avoid time and resource wastage. It will encourage high-quality students trained and industries would value the quality students exiting TVET college.
- DHET should revise TVET college curriculum and structure syllabus well so that it may afford graduates the skills needed for employability. It should have subjects focused on skills required by industries and incorporate practical work imitating workplace environment so that graduates are ready for work when they exit the TVET college. This means less theory and more practical work at TVET colleges.
- Openness to lecturers' ideas that are geared to TVET college improvement.

5.5.3 Employers

- To have a look at the NC(V) qualification as a better NQF level 4 qualification than the academic Grade 12.
- To engage with TVET college stakeholders of this region and stipulate what skills are required for students' employability.
- To contribute to the subject content of the TVET college engineering curriculum and assist with workshop equipment or workshop exposure that will help students' employability.
- To collaborate with the TVET college to be part of their Youth Employment Service (YES) programme, as most of the students are from this region of Mpumalanga.
- Openness to discuss or engage employers on how collaboration works.

5.6 DELIMITATIONS OF THE STUDY

The study involved five engineering studies lecturers from a campus of Gert Sibande TVET College in Mpumalanga province. Lecturers of other subject areas from other campuses were not included in the study, although participants referred to them. The reason for their exclusion in the study was because of the minimal role they play in the engineering department, meaning they do not have any workshop exposure or in other cases, there were two lecturers for the same subject. The sample of the study focused on experienced lecturers in the engineering field and business studies.

5.7 LIMITATIONS OF THE STUDY

Neuman (2011 as cited in du Plooy-Cilliers, 2015) stated that a qualitative researcher attempts to capture and describe the inner lives of people and methods allow understanding the why, what and how of phenomena. The researcher acknowledges limitations to describe inner lives of participants of this case study. The study might have limitations to subjectivity and possible bias of data obtained from the participants. Accessibility was another limitation for this research, some participants were not accessible at the time arranged for data collection, which meant rescheduling of appointments (Enslin, 2015). This was a small-scale study involving two campuses of Gert Sibande TVET College and the Deputy CEO Academic Affairs who is based at the Central Office in Standerton. In this instance, the findings cannot be generalised beyond the context of the study because data collected represented perceptions of five Engineering lecturers, three Business Studies lecturers, two focused groups of

students, one Campus Manager, three employers and one Deputy CEO Academic Affairs.

5.7.1 Limitations from the literature

The literature reviewed showed that none of the studies conducted at both local and international levels considered policy document stipulating the type of skills recommended for TVET colleges to industry skills' demands. Some literature show collaboration between the TVET colleges curriculum and industry requirements to enable students' employability. There appeared to be a major gap in skills mismatch as revealed in most of the studies and that is a major gap which this study sought to address.

5.7.2 Limitations from empirical research

This study's focus was on the Engineering Department. The question remains, "If the same study was done for the Business Studies programmes, would the findings differ?" It was limited to Mpumalanga province and focused on one college. There are a few TVET college students in this region who are in employment that has no relation to their career path. This might be unique for this region.

5.8 FUTURE RESEARCH

After completing data analysis, further research could be done to facilitate a way of incorporating industries and TVET colleges in a working relationship that allows graduates to get an internship or an apprenticeship which may lead to employment. A model could be developed that requires industries to stipulate what kind of skills they require and how colleges would roll it out to suit industries' needs. TVET colleges train graduates with the hope that they may be absorbed by industries in their region, and if TVET colleges cannot be their feeder, the government is not getting a return on their investments and valuable time, plus resources are being wasted.

This study's findings are limited to a small qualitative sample. The researcher recommends that a larger mixed-method population related to the research topic be undertaken to understand the scale of the problem to curb youth unemployment.

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APPENDICES

APPENDIX A: DHET request letter to conduct research in a Public College

DHET 004: APPENDIX 1: APPLICATION FORM FOR STUDENTS TO CONDUCT RESEARCH IN PUBLIC COLLEGES

6. DECLARATION BY THE APPLICANT

I undertake to use the information that I acquire through my research, in a balanced and a responsible manner. I furthermore take note of, and agree to adhere to the following conditions:

a) I will schedule my research activities in consultation with the said College/s and participants in order not to interrupt the programme of the said College/s.

b) I agree that involvement by participants in my research study is voluntary, and that participants have a right to decline to participate in my research study.

c) I will obtain signed consent forms from participants prior to any engagement with them.

d) I will obtain written parental consent of students under 18 years of age, if they are expected to participate in my research.

e) I will inform participants about the use of recording devices such as tape-recorders and cameras, and participants will be free to reject them if they wish.

f) I will honour the right of participants to privacy, anonymity, confidentiality and respect for human dignity at all times. Participants will not be identifiable in any way from the results of my research, unless written consent is obtained otherwise.

g) I will not include the names of the said College/s or research participants in my research report, without the written consent of each of the said individuals and/or College/s.

h) I will send the draft research report to research participants before finalisation, in order to validate the accuracy of the information in the report.

i) I will not use the resources of the said College/s in which I am conducting research (such as stationery, photocopies, faxes, and telephones), for my research study.

j) Should I require data for this study, I will first request data directly from the Department of Higher Education and Training. I will request data from the College/s only if the DHET does not have the required data.

k) I will include a disclaimer in any report, publication or presentation arising from my research, that the findings and recommendations of the study do not represent the views of the said College/s or the Department of Higher Education and Training.

l) I will provide a summary of my research report to the Head of the College/s in which I undertook my research, for information purposes.

I declare that all statements made in this application are true and accurate. I accept the conditions associated with the granting of approval to conduct research and undertake to abide by them.

SIGNATURE	[redacted]
DATE	24/6/2019

APPENDIX A: DHET Application Form for student to Conduct Research in a Public College

DHET 004: APPENDIX 1: APPLICATION FORM FOR STUDENTS TO CONDUCT RESEARCH IN PUBLIC COLLEGES

FOR OFFICIAL USE

DECISION BY HEAD OF COLLEGE

Please tick relevant decision and provide conditions/reasons where applicable		
Decision		***Please tick relevant option below***
1	Application approved	✓
2	Application approved subject to certain conditions. ***Specify conditions below***	
3	Application not approved. ***Provide reasons for non-approval below***	

NAME OF COLLEGE	Gert Sibande College Evander
NAME AND SURNAME OF HEAD OF COLLEGE	ZE Mkhethwa.
SIGNATURE	
DATE	24-06-2019

G.S. TVET COLLEGE
EVANDER CAMPUS
PRIVATE BAG X1007
EVANDER, 2280
2019 -06- 24
TEL : (017) 632 2388/9
FAX : (017) 632 1863

APPENDIX B: Requesting permission to conduct research

REQUESTING PERMISSION TO CONDUCT RESEARCH

To: CEO Academics

Of: Gert Sibande College

Request for permission to conduct research at Gert Sibande College Skills Academy Standerton

Title of the title of my research is – The relevance of qualification offered at a selected Technical Vocation Education and Training (TVET) College in Mpumalanga.

Date – 1/8/2019

Name: Mr. Neelan
Department: Central Office
Contact details: 017 712 2180

Dear Mr. Neelan

I, Lucy Elizabeth Wanjugu Schnobel is doing research under supervision of S Mokoena, a Professor in the Department of College of Education towards an M Ed at the University of South Africa. I have funding from ETDP-SETA & Bursary from the University of South Africa for my tuition and research purposes. I am inviting you to participate in a study entitled "The quality of qualification offered at a selected Technical Vocation Education and Training TVET College in Mpumalanga."

The aim of the study is to:

Aim and objectives:

- To determine sets of skills required for TVET students' employability as perceived by lecturers.
- To determine the sets of skills required for TVET students' employability as perceived by students.
- Explore employers' perspective on viable employability skills for TVET College students.
- Explore whether as defined by stakeholders, an interface exists between skills acquired and skills required and then describe the nature of the interface.
- To determine what TVET providers and employers in Mpumalanga can do to enhance students' employability.

Your campus has been selected because you offer certain sets of skills that are not offered at my campus and you will be able to share your perspective on the difference and how it might affect employability in this region.

The study will entail:

Focus groups and individual interviews will be conducted to determine the participants' experiences regarding the qualification. The in-depth interviews will be conducted as open-ended conversations and will be recorded for authenticity purposes. Interviews with open-ended questions will be used to collect data as well as questionnaires will be completed by participants to supplement the data gathered with interviewing.
This research approach will allow the collection of evidence of participants' feelings and opinions that are shared and experienced by people who are in similar situation. With reference to historical research. The researcher will therefore also collect data by looking at records of reports and certificates of the participants to make sense of a historical event.

The benefits of this study are to assist TVET College providers with information that will be relevant for them to find solutions to the problem of unemployment in our region. It will also benefit policy

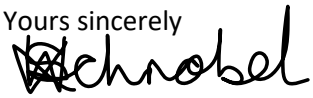
makers and curriculum developers to align programs and policies that will assist both students and industries.

Potential risks are none.

There will be no reimbursement or any incentives for participating in the research.

Feedback procedure will entail a detailed report of the findings sent to you via email once they are finalized.

Yours sincerely



Lucy Elizabeth Wanjugu Schnobel

Student – 3388638-5

APPENDIX B: Request permission to conduct research

REQUESTING PERMISSION TO CONDUCT RESEARCH

To: Campus Manager

Of: Gert Sibande College Skills Academy

Request for permission to conduct research at Gert Sibande College Skills Academy Standerton

Title of the title of my research is – The relevance of qualification offered at a selected Technical Vocation Education and Training (TVET) College in Mpumalanga.

Date – 1/8/2019

Name: Ms M Swart
Department: Skills Academy Standerton
Contact details: 017 714 1594/ 082 0888 219

Dear Ms. Swart

I, Lucy Elizabeth Wanjugu Schnobel is doing research under supervision of S Mokoena, a Professor in the Department of College of Education towards an M Ed at the University of South Africa. I have funding from ETDP-SETA & Bursary from the University of South Africa for my tuition and research purposes. I am inviting you to participate in a study entitled "The quality of qualification offered at a selected Technical Vocation Education and Training TVET College in Mpumalanga."

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- To determine the sets of skills required for TVET students' employability as perceived by students.
- Explore employers' perspective on viable employability skills for TVET College students.
- Explore whether as defined by stakeholders, an interface exists between skills acquired and skills required and then describe the nature of the interface.
- To determine what TVET providers and employers in Mpumalanga can do to enhance students' employability.

Your campus has been selected because you offer certain sets of skills that are not offered at my campus and you will be able to share your perspective on the difference and how it might affect employability in this region.

The study will entail:

Focus groups and individual interviews will be conducted to determine the participants' experiences regarding the qualification. The in-depth interviews will be conducted as open-ended conversations and will be recorded for authenticity purposes. Interviews with open-ended questions will be used to collect data as well as questionnaires will be completed by participants to supplement the data gathered with interviewing.
This research approach will allow the collection of evidence of participants' feelings and opinions that are shared and experienced by people who are in similar situation. With reference to historical research. The researcher will therefore also collect data by looking at records of reports and certificates of the participants to make sense of a historical event.

The benefits of this study are to assist TVET College providers with information that will be relevant for them to find solutions to the problem of unemployment in our region. It will also benefit policy

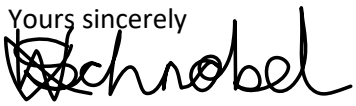
makers and curriculum developers to align programs and policies that will assist both students and industries.

Potential risks are none.

There will be no reimbursement or any incentives for participating in the research.

Feedback procedure will entail a detailed report of the findings sent to you via email once they are finalized.

Yours sincerely



Lucy Elizabeth Wanjugu Schnobel

Student – 3388638-5

APPENDIX C: Participant Information

PARTICIPANT INFORMATION

Date: 1/8/2019

Title: The relevance of qualification offered at a selected Technical Vocation Education and Training College in Mpumalanga.

DEAR PROSPECTIVE PARTICIPANT

My name is Lucy Elizabeth Wanjugu Schnobel and I am doing research under the supervision of S Mokoena, a Professor in the Department of Educational Leadership & Management towards M Ed at the University of South Africa. I have funding from ETDP-SETA & CEDU Bursary from the University of South Africa for my research studies. I am inviting you to participate in a study entitled "The quality of qualification offered at a selected Technical Vocation Education and Training (TVET) College in Mpumalanga."

WHAT IS THE PURPOSE OF THE STUDY?

This study is expected to collect important information that could help

- To determine sets of skills required for TVET students' employability as perceived by lecturers.
- To determine the sets of skills required for TVET students' employability as perceived by students.
- Explore employers' perspective on viable employability skills for TVET College students.
- Explore whether as defined by stakeholders, an interface exists between skills acquired and skills required and then describe the nature of the interface.
- To determine what TVET providers and employers in Mpumalanga can do to enhance students' employability.

The benefits of this study are to assist TVET College providers with information that will be relevant for them to find solutions to the problem of unemployment in our region. It will also benefit policy makers and curriculum developers to align programs and policies that will assist both students and industries.

WHY AM I BEING INVITED TO PARTICIPATE?

You are invited because you will assist in the collection of the information and you will give insight on what TVET Colleges could do to improve on employability of the youth.

I obtained your contact details from you. You are 12 participants who will be divided into two focus groups of six since you are in two different categories.

WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?

The study involves focus groups consisting of semi-structured interview questions. I shall also tape record the focus groups to represent you accurately. The time allocated for this is one hour for the focus group interviews.

CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY? There will be no reimbursement or any incentives for participating in the research.

ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?

There are no negative consequences at all. All information you give will not bear your name hence, anonymity will be observed, and this is purely for research purposes only.

WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?

Your name will not be recorded anywhere, and no one will be able to connect you to the answers you give. Your answers will be given a code number, or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings.

Your answers may be reviewed by people responsible for making sure that research is done properly, including the transcriber, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

For your information, your anonymous data may be used for other purposes, such as a research report, journal articles and/or conference proceedings. Please keep in mind that it is sometimes impossible to make an absolute guarantee of confidentiality or anonymity however, data will be stored in an external hard drive and copied on a CD.

Focus group is a group of six individuals being interviewed at the same time who will be asked same questions, and each will give their perspective on the matter. While every effort will be made by the researcher to ensure that you will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason, I advise you not to disclose personally sensitive information in the focus group.

HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet at UNISA library for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. The information will be destroyed and if necessary hard

copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer using a relevant software program.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

No incentive will be awarded to you for participating in the study.

HAS THE STUDY RECEIVED ETHICS APPROVAL?

This study has received written approval from the Research Ethics Review Committee of UNISA. A copy of the approval letter can be obtained from me as the researcher if you so wish.

HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please contact University of South Africa (UNISA) since the findings are accessible for five years.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact Lucy Elizabeth Wanjugu Schnobel on 071 473 6707 or email 33886385@mylife.unisa.ac.za.

Should you have concerns about the way in which the research has been conducted, you may contact Professor S Mokoena on 082 675 6155 or email mokoesp@unisa.ac.za

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

Lucy Elizabeth Wanjugu Schnobel

APPENDIX D: Questions for Graduates participants

FOCUS GROUP QUESTIONS: PREVIOUS GRADUATES

1) What skills sets do you consider to be important for justifiable employability? Please explain.

2) How were these skills developed in you while studying at the TVET College?

3) Did the engineering curriculum offered at the TVET College equip you with the needed skills for sustainable employability? Please explain.

4) What factors hindered the development of skills required for functional employability? Explain.

5) What factors promoted the development of skills required for functional employability? Explain.

6) How do you manage to be well-informed about available functional employability?

7) Were you adequately prepared by your TVET College qualification for your current or future job? If so explain.

8) Have you or did you encounter any difficulties seeking employment with your qualification from TVET College? If so, explain.

9) What can be done to improve your chances for employability?

10) Anything else you wish to add, or you would like noted?

FOCUS GROUP QUESTIONS: CURRENT GRADUATES

1) What skills sets do you consider to be important for justifiable employability? Please explain.

2) How are these skills being developed in you while studying at the TVET College?

3) Do you think the engineering curriculum offered at the TVET College equips you with the needed skills for sustainable employability? Please explain.

4) What factors hinder the development of skills needed for functional employability? Explain.

5) What factors promote the development of skills required for functional employability? Explain.

6) How do you manage to be well-informed about available functional employability?

7) Do you think you will be adequately prepared by your TVET qualification for a future job? If so, explain

8) What can be done to improve your chances for employability?

9) Anything else you wish to add, or you would like noted?

APPENDIX E: Questions for Lecturers; Employers and Student Liaison Officer

INTERVIEW QUESTIONS: LECTURER/STAKEHOLDERS

1) What sets of skills do you consider to be important for sustainable employability? Please explain.

2) How do you develop these skills in students?

3) Does the TVET engineering curriculum used at this college equip the students with the skills needed for functional employability? Please explain.

4) What factors hindered the development of skills for functional employability? Explain.

5) What factors promoted the development of skills for functional employability? Explain.

6) How do you manage to be well-informed for viable employability?

7) Does the curriculum prepare the students for employment? Please explain.

8) What can be done to increase the chances for students' employability with their TVET qualification?

9) What else would you like to be noted to increase employability?

INTERVIEW QUESTIONS: EMPLOYERS

1) What sets of skills do you consider to be important for functional employability? Please explain.

2) How do you enhance these skills in your employees?

3) Does the TVET engineering curriculum used at Gert Sibande College equip graduates with skills needed for functional employability? Please explain.

4) Have you offered TVET graduates' employment? If not, please explain.

5) What factors hinder the development of skills for viable employment? Please explain.

6) What factors promote the development of skills for functional employment? Please explain.

7) What sets of skills should TVET providers provide the students for functional employability?

8) What else would you like to be noted by TVET so as to increase students' employability?

INTERVIEW QUESTIONS: STUDENT LIAISON OFFICER

1) Does the TVET engineering curriculum used at Gert Sibande College equip graduates with skills needed for functional employability? Please explain.

2) What factors hinder the TVET College graduate to acquire viable employment in the region of Mpumalanga? Please explain.

3) What factors promote acquisition of students' functional employment? Please explain.

4) What should TVET providers do in order to increase TVET College students' chances for functional employability?

5) What else would you like to be noted by TVET College providers, employers and stakeholders to increase students' employability?

APPENDIX F: Interview Schedule

INTERVIEW SHEDULE:

1. Why did you choose to enrol at a TVET college?
2. Have your expectations been met?
3. The career you chose, does/did it meet your expectations?
4. What experience do you have of the subject that you teach?
5. Does the subject content meet industry's demand for employment?
6. For an artisan student, do the set skills you teach prepare them for employment? If not, what are the core skills you think would set them apart?
7. Do you think TVET College prepared/has prepared you for employment? Explain.
8. Are there specific skills you expect TVET graduates to have before they are employable?
9. Have those skills been communicated with the TVET providers? If not, have you any intention of doing so?
10. What sets your campus apart from the others?
11. Do you think you shall have a problem finding employment after you graduate? Explain.
12. What challenges have you faced when looking for work/placing students?
13. What are some of the challenges you have faced when teaching the subject?
14. What are the challenges you have experienced with TVET qualification?
15. Are you aware that there are TVET colleges around this region offering engineering programs?
16. Would you consider exploring the content of the programs?
17. What are your thoughts about the programs set for engineering?
18. Is there anything that can be done to improve the content of engineering programs? If so, explain.
19. Have you ever felt inadequate to teaching the set syllabus? Explain.
20. Does the college encourage lecturer skills development? If so, does the college cover the cost?
21. How do you keep informed about the current technology?
22. What are your thoughts about 4^{th} industrial revolution?

23. Do you think the TVET College is making efforts to equip the students for this? Explain.
24. As a company do you consider it a necessity for employment. Explain.
25. Do you think the TVET Colleges would be perfect employee feeders for industries in the region? Explain.

APPENDIX G: Ethics certificate

UNISA university of south africa

UNISA COLLEGE OF EDUCATION ETHICS REVIEW COMMITTEE

Date: 2019/07/24

Ref: **2019/07/24/33886385/32/MC**
Name: Mrs LEW Schnobel
Student No.: 33886385

Dear Mrs Schnobel

Decision: Ethics Approval from 2019/07/24to 2022/07/24

Researcher(s): Name: Mrs LEW Schnobel
E-mail address: 33886385@mylife.unisa.ac.za
Telephone: +27 71 473 6707

Supervisor(s): Name: Prof S Mokoena
E-mail address: mokoesp@unisa.ac.za
Telephone: +27 82 675 6155

Title of research:

The quality of qualifications offered at a selected Technical Vocational Education and Training (TVET) College in Mpumalanga

Qualification: M. Ed in Educational Leadership and Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2019/07/24 to 2022/07/24.

*The **medium risk** application was reviewed by the Ethics Review Committee on 2019/07/24 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data requires additional ethics clearance.
7. No field work activities may continue after the expiry date **2022/07/24**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

The reference number **2019/07/24/33886385/32/MC** *should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Kind regards,

Prof AT Motlhabane
CHAIRPERSON: CEDU RERC
motlhat@unisa.ac.za

Prof PM Sebate
ACTING EXECUTIVE DEAN
Sebatpm@unisa.ac.za

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